A NEW CALENDAR FOR A NEW WORLD

VOL. XIII THIRD QUARTER, 1943 No. 3

IN the past three months, more than 17 business and social groups have either endorsed The World Calendar or have voted the appointment of study committees to investigate it. This is real progress when one remembers that it has been said that great social changes advance by taking three steps forward and falling back two.

Business men see in this orderly rearrangement of our present calendar a way to accomplish more with less confusion, with greater directness, and without disturbing the routine of their established order.

Educators, appealed to by the sheer logic of a calendar that makes all periods regular and equitable, with every year the same, are among the leaders in this effort to bring orderliness of time to the world.

Attorneys, accountants, manufacturers by the score see in The World Calendar no interruption of their present methods, but an improvement that will be felt through the scientific and social life of the nation.

Of the 17 groups, the latest resolution approving it is by the Pittsburgh Chamber of Commerce, a body made up of men more diversified in their endeavors and interests than probably any other like organization. To this can be added the Advertising Club of Johnstown, Pittsburgh's Junior Chamber of Commerce, and the Fraternal Congresses of the State of Washington, Canada, New England, and other like organizations.

Awakened to the need for this change, Rotary International, Lions International, the Advertising Club of St. Louis, together with the Texas Newspaper Advertising Managers Association, to name but a few, have voted to study this new time-plan so that action may be taken on the recommendation of the committee.

With assured changes in the world, there is an increased awareness of the need for a calendar that stays put, that brings orderliness out of confusion, without a disrupting transitional period.

The World Calendar is making real progress—definitely, thoroughly, convincingly—with the active and interested support of people and organizations which are leading nations toward new and better goals.

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1943

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EMERSON BREWER, Editor
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FIND QUARTER-YEAR PLAN THE BEST FOR PRIORITY CONTROL

By Wade H. Poston

Mr. Poston speaks with no little authority on the intricacies of priorities. With the exception of a short period of time in the army, from which he recently received a medical discharge, Mr. Poston has held the position of Priorities Manager of the American Gas Furnace Company, Elizabeth, New Jersey. The company manufactures heat-treating furnaces which are used in hardening bearings, annealing metal and preparing motor parts for war work.

"PRIORITIES" is becoming more and more the accustomed answer to explain the absence of familiar articles in wartime living. Our automobiles, vacuum cleaners, and radios—"priorities" has taken them all. Military needs must march in advance of civilian needs. The priorities system establishes the necessary rules of precedence and tells which things come first. It not only sets up quotas of military and civilian goods, but also distinguishes between the importance of various military programs themselves. Are planes more important than tanks or battleships? Are radar locators needed more than incendiary bombs? Our national stock of raw materials and productive equipment—both too small for the only time in history—must be set to work on the most important jobs first.

The administration of the priorities system by the War Production Board and its associated agencies is the largest, most delicate, and most vital accounting job ever undertaken by man. It attempts to correlate the four fundamentals of our national power—materials, manpower, equipment, and time—to achieve the highest possible degree of productive efficiency.

One of the most interesting phenomena connected with the development of priorities is the gradual but insistent way in which time came to be recognized as one of the four fundamentals of the structure. The first priority laws erected only a method of differentiation between purchase orders, so that industrial suppliers could tell which of their customers were working on defense contracts and which were not. The law com-

pelled them to fill the defense orders first and the other orders second, if any materials were left. When it became apparent that defense orders alone could consume more than the entire supply of materials, a system of symbolization (A-1-a, A-1-b, etc.) was developed to indicate the relative importance of defense orders among themselves. This was known as the "preference rating system," and with certain modifications it still remains in effect.

Yet in November, 1941, the situation had still not been realized as essentially one of time, as well as of materials, men, and equipment. Pearl Harbor provided the necessary stimulus. The meaning of "too little and too late" was suddenly driven home. It was realized that war demanded not only the right thing in the right place—but at the right time! This change in thinking was quickly mirrored by the priorities system.

The Production Requirements Plan—which later developed into the present Controlled Materials Plan—gave the first concrete recognition to the time-factor in National Planning. With relation to the equal quarter-years of The World Calendar, it is especially significant that the quarter-year was the unit of time chosen for the basis of this revised priorities system. Under the new arrangement, manufacturers prepared a quarterly request for permission to purchase scarce materials. This request was then reviewed by the War Production Board and approved or somewhat pared, as determined by the manufacturer's importance in the over-all pattern of the war. From the producers of raw materials, the War Production Board learned exactly how much of each material could be made available to manufacturers in each period. Strict records had to be kept by every manufacturer of how he disposed of his quarterly allotment. The purchasing activities of all companies went on a quarterly basis, insofar as their dealing with the government was concerned.

CMP, or the Controlled Materials Plan, further refined the workings of the priorities system and further extended the time-factor into planning for war production. Not only purchases of materials, but also deliveries of finished products, heretofore supervised, often conflictingly, by the many branches of the armed forces, were coordinated under War Production Board scheduling. Again, the quarter-year was selected the most practical time interval. An attempt to use a monthly basis had to be abandoned, even after the necessary forms had been printed and distributed to industry. This withdrawal demonstrated once more a fundamental precept of industrial accounting—that for most purposes the best and truest time-unit is the quarter-year, and that this unit is therefore the most in need of standardization. In considering calendar revision from the viewpoint of a priorities worker, equality of the quarters overwhelmingly outweighs equality of the months. To impose such a scheme as the Thirteen-Month Calendar on industry would not only disrupt the internal accounting prac-

tices of every firm, but also would hopelessly confuse the vast system of inter-company priorities which must be kept intact as an instrument for winning the war. The keystone of this system is the quarter-year, and only a 12-month calendar can furnish quarter-years commensurate with the months.

Thus, from a position of entire neglect, the time element has grown to a production factor of inestimable importance. To achieve maximum production every detail must be exactly timed—not only in one industry or one plant, but in the entire chain of plants making parts or tools for the final tank or plane. A day too late in the delivery of an essential part can "damage" a life-saving ambulance as easily as an accident on the battlefield. A day too early is just as serious, if it means that something of greater importance was neglected to rush an article to completion before it was needed. Little wonder that the men who are responsible for the supervision of this scheduling have frequent cause to wish that the units of time with which they work were more exact! The endless and ever-changing compensations for short months, unevenly interspersed holidays, and unequal quarter-years, can be made, of course, but in a business of even moderate size and complexity they burn valuable minutes which might better be put on other aspects of production. How would our shop foremen feel if for every job the length of an inch might vary 10 or 11 per cent—as the lengths of the months do!

It seems almost inconceivable that our present calendar should continue to exist in a world where mechanical tolerances of thousandths of an inch are considered large. In undertaking to juggle the world's biggest accounting job on this shaky stage, we are using a time standard created when hand-breadths and paces were still acceptable forms of linear measure. Who would try to grind a cylinder or cut a gear by these measurements? But the immemorial procession of unbalanced days, months, and weeks still serves when we plan the stages of production, and when we set a promised date on which the completed engine will be delivered.

True enough, we shall never bring time measurement to the niceties observed by our inches, centimeters, quarts, and pounds. Earth, sun, and moon—the three great hands of the astronomical clock—immutably govern the calendar; and these hands themselves are a little awry. The moon insists that there are not 12 months in a year, but about twelve and a third. The earth refuses to revolve 360 times in its yearly orbit, but approximately 365¼. To this, add the fact that the week must contain seven days, as fixed by a tradition ages old, and you will see the difficulties that confront the makers of calendars. Under no circumstances can 12 1/3, 365 1/4, and 7 be fitted together into an even pattern.

But effective compromises among all the incommensurables of time can be made, and have been made in The World Calendar. To the priorities man

perhaps the most important change is that the valuable quarter-year is no longer a telescopic ruler, varying in length from 90 to 92 days. In The World Calendar, the quarter-years are firmly and thankfully fixed at an equal length of 91 days or 13 weeks.

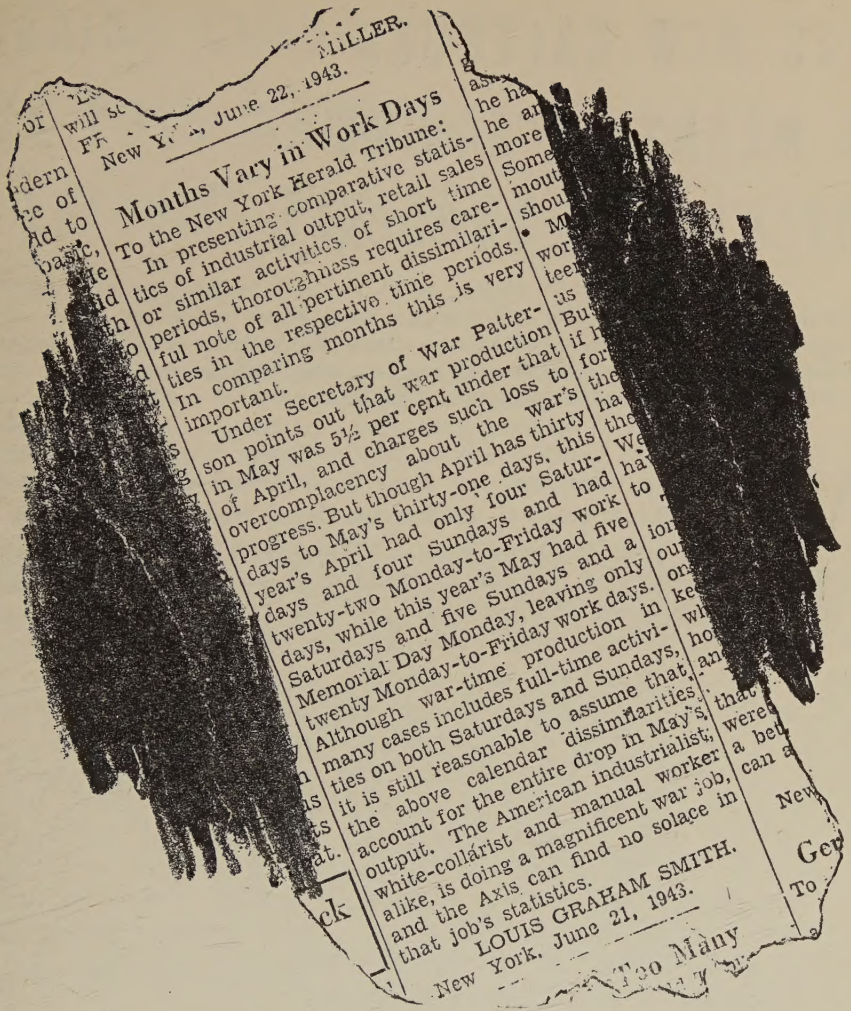
Other improvements: In long-range planning, such as must now be done to face the contingencies of war, it would be invaluable to have all years exactly alike. The World Calendar accomplishes this. Every year begins on a Sunday and ends on a Saturday. From one year to another, days of the week always fall on the same date—the third of February is always a Friday, the eighth of November is always a Wednesday. A manufacturing schedule made for one year can be compared or even repeated without change in the next year.

Even the unruly month has been tamed by the ingenious World Calendar. All months contain either 31 or 30 days. The months are arranged within the quarter-year in an orderly, easy-to-remember pattern. The first month of each quarter is long, the second two are short. In the long months, the extra day is always a Sunday, so that every month contains exactly 26 weekdays.

The mechanism of The World Calendar has an appealing and business-like simplicity. The year is trimmed to the flexible and factorable length of 364 days, just long enough for 52 complete weeks. One intercalary day is inserted between years to keep correspondence with sun time. This extra day occurs between Saturday, December 30, of the old year, and Sunday, January 1, of the new year.

Not a day of any week, a day without number but a name, it is sometimes called an "extra Saturday," and in time of peace would be observed as an international holiday. For the rest of it, The World Calendar is a common-sense rearrangement of the lengths of the months, which should have been done ages ago. In all major details, The World Calendar duplicates the present calendar. The transition would have no more perceptible effect than the repair of an irregular clock. To all appearances, it is the same clock; the benefit is that it runs better.

From the priorities viewpoint, virtually the only "objection" to The World Calendar is that the transition from the old to the new calendar cannot be made easily until January 1, 1945, at which time all men fervently hope that the war will be over and priorities a thing of the past. But at the present writing, it seems unfortunately likely that the war may continue well beyond the transition date. At that time, it is possible that we shall hear arguments that we should let the change from our present calendar to The World Calendar wait until after the war. Rather, it seems to me, *we cannot be too quick to seize upon this improved time measuring instrument* to help us marshal our national facilities and bring the war to the speediest possible conclusion.



MILLER.

New Y[illegible], June 22, 1943.

Months Vary in Work Days

To the New York Herald Tribune:

In presenting comparative statistics of industrial output, retail sales or similar activities of short time periods, thoroughness requires careful note of all pertinent dissimilarities in the respective time periods. In comparing months this is very important.

Under Secretary of War Patterson points out that war production in May was 5½ per cent under that of April, and charges such loss to overcomplacency about the war's progress. But though April has thirty days to May's thirty-one days, this year's April had only four Saturdays and four Sundays and had twenty-two Monday-to-Friday work days, while this year's May had five Saturdays and five Sundays and a Memorial Day Monday, leaving only twenty Monday-to-Friday work days. Although war-time production in many cases includes full-time activities on both Saturdays and Sundays, it is still reasonable to assume that the above calendar dissimilarities account for the entire drop in May's output. The American industrialist, white-collarist and manual worker alike, is doing a magnificent war job, and the Axis can find no solace in that job's statistics.

LOUIS GRAHAM SMITH.

New York, June 21, 1943.

Too Many

THE vagaries of our present calendar tend not only to distort the statistics of retail business, but also add confusion to the records of war production achievement. With months differing in length, with holidays wandering through the years and with comparability practically impossible, it is but little wonder that errors such as those discovered by Louis Graham Smith crept into Under Secretary of War Patterson's report to the nation. In discussing this error in his letter to the *New York Herald Tribune,* June 21, Mr. Smith unwittingly presented a tremendous indictment of our present calendar and gave an illuminating example of why The World Calendar's adoption should by all means be hastened.

SEES NEW CALENDAR AS MEANS OF EASING ADVERTISING BURDEN

***Advertising Age** is a weekly, tabloid-size newspaper rated as indispensable among advertising men and those interested in sales. The following article appeared in the "Ad-libbing" column of that publication on August 2, 1943.*

WE have been interested for some time in the efforts of The World Calendar Association to modernize the existing calendar so as to eliminate the inconsistencies and inconveniences which are inherent in the Gregorian system of measuring the passage of days and months. The proposed World Calendar would have four equal quarters, each comprising 91 days, with Year-End Day appearing as an extra Saturday with no date, and the same applying to Leap-Year Day. Each quarter of the year would begin on Sunday and each would end on Saturday; each would contain three months and exactly 13 weeks. The first month of each quarter would have 31 days, and all other months would have 30 days, so that there would be 26 weekdays in each month, with the first month in each quarter having five Sundays and the remaining months four. As the system works out, each month-date would always fall on the same weekday. For example, if August 4 were Saturday in the proposed World Calendar (as it is), August 4 would always be Saturday, from now until the end of time; December 25 would always be Monday; January 1 would always be Sunday.

This calendar is so simple and so practical that it should be of tremendous help to everyone, not least of whom would be advertising men. Closing dates of magazines and newspapers would be inviolably fixed and would never have to be adjusted to take care of varying breaks in the working week; March would cease to crowd on the heels of tiny February; one quarter would be exactly the same as the other, etc., etc.

Manufacturers of calendars are probably not too impressed with the proposed device, because with it calendars issued in 1945 would be just as useful ten years later; there would be no change in them. But manufacturers of calendars are resourceful enough, no doubt, to solve this slight problem for themselves. As for the rest of us, the new calendar seems like a useful, sensible, helpful change.

FIGURING LABOR DAY DATE PUTS WRINKLES ON EDITOR'S FOREHEAD

By Walter Locke, Editor, Dayton, Ohio, Daily News

Mr. Locke writes a column "Trends of the Times," which appears in a group of newspapers in Ohio and in several southern states. This column, having to do with The World Calendar, appeared August 6, 1943, and because it represents the opinions of a man "on the outside looking in," it is of unusual general interest.

THE question was, what day of September will be Labor Day, and there wasn't a calendar within a mile. The first Monday in September, of course; but would that first Monday be the first or seventh of September, or what? An inspiration!

Someone remembered last July Fourth fell on Sunday. We could start from that. Thirty-one days hath July. Three weeks from the Fourth was the 25th, which would make Monday the 26th, Tuesday the 27th, Wednesday the 28th of July. Thursday, Friday and Saturday would be the other days of July. So now August 1 fell on Sunday. Add four weeks and you have Sunday, August 29, Monday would then be the 30th, Tuesday the 31st. August does have 31 days, doesn't it?

A little discussion here, but the vote was two to one: August has 31 days, and its first day this year was Sunday. Four weeks later would be Sunday, August 29. The next day, Monday, would then be the 30th, Tuesday the 31st. So September 1 would fall on Wednesday. Thursday would be the second, Friday the third, Saturday the fourth, Sunday the fifth. There we have it; Labor Day will be Monday, September 6.

It took smart folks to figure that out. It was hard work and it took a half hour's time with all sorts of chances to make mistakes. But there it is. Labor conquers all things, even the date of Labor Day.

The World Calendar Association, if it had its way, would have saved us this time and strength. When its new calendar gets going, the first Monday in every September will be the fourth. Labor Day will be forever Monday, September 4.

Next year Labor Day will fall on the fifth. Or is it the seventh? We can never be sure which way, whether backward or forward, the cat is to

jump. But wait. Next year is leap year. Labor Day and all the other days will jump one way or the other two days instead of one.

Why hasn't the National Cash Register Company thought out a computing machine to perform these intricate calendrical computations for us as it does our arithmetic machines?

Why, asks The World Calendar Association, Inc., don't we fix the calendar so no such calculation is required? Streamline the calendar for the streamlined world we plan when the war is done.

The travail of the mind it would save if we didn't have to stop and say "Thirty days hath September," etc., every time we need to know the length of May or the shortness of February!

There's going to be hot competition in the world when the war is done. No lost motion of mind or muscle will be safe. The people who must stop, take a pencil, hunt up a scrap of paper and perspire to find the day in September when Labor Day comes will be left at the post by people of a simpler calendar.

Every first Monday in September could be the fourth, every July 4 a Wednesday, every Thanksgiving the 23d, and every Christmas, Monday, December 25.

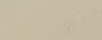
To rest our nerves from the war some go fishing, some play croquet, some take a nap, some think how fine it would be if every quarter-year had the same number of days. Then statistics wouldn't lie quite as they do now.

What a rest, too, if all we had to remember is that the first month of each quarter has 31 days and the other two months 30.

All this the new calendar, with which the Association would like to bless the world, does so simply why didn't Caesar think of it 2000 years ago?

We're so conservative, these democratic peoples (Look at our fussing about the little matter of an hour's shift in the clock!), we haven't much hope that the offered blessedness will be grasped. A world that sticks to its kings' feet for measuring standards when the metric system is right at hand moves pretty slow.

The whole round tiny world, these coming postwar days, is to be meshed together in one vast reciprocating mass. To escape confusion, there'll have to be a great simplifying and standardizing of things. Money, maybe; mails, surely; weights and measures, certainly. A calendar, sooner or later, in which you can figure out in less than half an hour the date of a coming Labor Day. We've disposed now of great Caesar's successor in Rome. Why hold sacred any longer the crotchety calendar the great first Caesar so awkwardly contrived?



DEMAND FOR NEW HOUSES WILL HELP POSTWAR ECONOMIES

By Porter Moore, Executive Secretary, Postwar Housing Council, New York City

SOME people believe that home building will lead the nation back to normalcy after the war has ended. There are others who are convinced that the "family car of the air" will bring employment to millions when they return to the normal ways of American life.

Still another school of thought will wager that the demand for new cars, for washing machines, ironers, electric irons, and refrigerators will bridge the gap between our war economy and peacetime economy.

It is anyone's bet. We do know, however, that the replacement of worn-out and obsolete household equipment will bring employment to millions, employment in their manufacture, in their distribution, and in their sale. Let us assume that prior to the conversion of industrial plants to war industry, we absorbed 2,000,000 refrigerators a year—this total being made up of those refrigerators which had worn out, those purchased by people whose economical situation had bettered and by the millions of young couples who marry and establish their own households.

People generally believe that at least four years will have elapsed from the time our factories stopped making refrigerators until with victory achieved on world war fronts they can tool-up, get set, and start distributing refrigerators again. That means there will be a ready-made waiting market for at least 8,000,000 refrigerators. Applying this reasoning to other household appliances, we can see that our plants are going to be pretty busy making those millions of refrigerators, the thousands and thousands of ironers and the millions of toasters and electric irons which will be needed to replace those worn out during the period our plants have been devoted entirely to making war machines and war equipment.

Automobiles will be needed by the thousands, maybe millions, to supply the vast multitude of people to whom a motor car is a basic necessity and to those who feel a car or two is a necessary luxury.

There is no gainsaying the fact that there will be plenty of money to spend. Our war savings record assures this. Also the promise of forced savings, which many people believe is as sure as taxes, will add to our

accumulation of wealth. This large money supply is but waiting a time when there is something to buy. It is quite true that many people will buy small planes. Air-minded boys, accustomed to going as the crow flies, will either buy planes themselves or prevail upon their parents to buy planes. This alone will absorb millions of our accumulated savings, but there will be billions left.

In terms of volume this first home-buying wave is expected to total something like 1,000,000 houses, although, if fighting continues through 1944, it will be even higher because more families will have reached the buying stage. However, if even 1,000,000 families rush to the market for a home within six months after the war ends the building industry will be strained to the utmost to supply the demand, because the largest number of units ever built in a year in the United States was 900,000, and this was way above the average.

But there will be a second wave of buying, and that will be the housing needs of the demobilized servicemen. The important characteristic of this wave is that it will consist almost entirely of newly formed families. Obviously the fighting man who was married just before he entered the service, or who made definite marital plans, will need a home of some kind when he gets back. But they will have to figure out how they are going to fit into our postwar economy before they start to dig a foundation. Consequently it should be apparent that this second wave will not reach its crest until several years after the war. The number of houses that these men will require has the statisticians stumped. The best guess, however, is that the demand will fall somewhere between one-half a million and 1,000,000 homes.

The annual average building volume between World War I and World War II was one-half a million non-farm dwelling units of all kinds. In 1925, which was a peak year, it hit 900,000 units. The depression batted it down, but it climbed again to 700,000 in 1940. It is significant to note that the average FHA evaluation declined from $6,255 in 1936 to $5,238 in 1941.

Since census experts claim that the net new families each year average 450,000, it is clear that when we only build 500,000 new housing units each year there is little left over for replacements. There are 29,000,000 housing units of all kinds in non-farm areas, and with our present building rate, 500,000 new units each year, the difference leaves 50,000 for replacements after the new families are deducted.

But in my opinion, and I base this on surveys which have been made in various sections of the nation, the construction of new homes and apartments will be one of the basic industries which will lead this country back to its normal production and employment and wage volume.

An amazing number of people who were interviewed in Fort Wayne,

Indiana, placed a "home of their own" as the first thing they plan to buy when the war ends. Strangely enough, and to our national credit, this group is represented not alone by newly married couples but by the older people as well. They see in a "home of their own" security, a safe place for their money and their savings, and independence hitherto impossible under conditions where all they got from their rent payment was a receipt.

Then, too, liberalization of government credits for home building, and the guarantees under this act will do much to lessen the burden which has heretofore threatened the security of the man who bought a "house with a double mortgage."

I have often been asked what forms these new homes will take. Will they be "modern" in design with floating partitions? Will they have side walls that roll up to admit the sun and air? Will all the household appliances be of the built-in variety? Will the walls be constructed of steel, wood, composition, concrete, or glass?

It is true that production know-how, spurred by war necessity, has telescoped decades of progress in home building in the years since our plants went all out for war.

But as far as I can see, most of the homes, ground for which will be broken as soon as materials are released, will be the more or less orthodox home embellished with conveniences heretofore but visions of the most imaginative housewife.

Air condition systems will permit the home owner to be his own weather man; they will filter pollens that cause hayfever and asthma. There will be built-in features. Houses will be insulated. It is quite possible that windows that will never be raised will be part of your new home. Your light fixtures will probably be of the concealed type.

The kitchen will be a marvel to the long-married couple and a delight to the new bride. It will have conveniences beyond imagination, with garbage disposal in the sink, instant but inexpensive hot water, wash tubs with wringer fixtures, dish washers as well as dryers. Stoves will be styled not only for beauty but for efficiency as well. Fuel consumption, gas or electric, will be at a minimum.

It is true that glass will play a greater part in the after-the-war home. This will make for lighter rooms, more sunshine, and the windows will be placed with the thought of the vista.

Porches will be larger, and homes and landscaping alike will be planned with an idea of more time out of doors. But in design, I feel that we, as a nation, will be slow to adopt the radical modern type of architecture. True it will come, but its acceptance will be slow because we, as a people, have a concept of home not too widely disassociated from the house in which we were born or where we have spent many happy years. For this psychological reason alone, the development of exterior designs of the

radical type will be slow in coming. However, being a luxury-minded nation, being a people accustomed to the "better" things, the "after-the-war home" will be a magician's dream of convenience inside.

It has been my good fortune to look inside the development laboratories of many of our largest appliance and plumbing companies. Ideas and plans which were but a gleam in the inventor's eye prior to the war are being tested and readied for immediate production as soon as the necessary supplies are available, awaiting the time when manufacturing lines, now devoted to war products, will be converted to peacetime goods.

There will be built-in radios, television sets, and tubular lights hidden in the molding that will give a daylight atmosphere regardless of the sun.

Manufacturers, distributors, transport companies, and artisans alike will be taxed to their utmost to build the millions of homes which our overcrowded condition, our housing shortage, and the impatient prospective home owner, with money in the bank, will demand.

Contractors are going to have an opportunity to make a lot of money. Everybody, if they plan wisely, is going to benefit from this surge of home construction. Competition will be keen between manufacturer and builder alike, and it will call for careful planning.

It is because of this need for careful planning, for careful scheduling, for watching every dime and dollar that I became interested in The World Calendar of 12 months and equal quarters. Unfortunately many times it has been our practice in the building business to think of deliveries and completion dates in 90-day intervals; and that can well be one of our fallacies.

Let us take the case of a contractor who is figuring a construction job on a series of houses, the contract of which includes a time penalty clause. Labor costs take up 60 per cent of the estimated contract. Hence, the number of working days in each month, holidays discounted and half-days off, can well represent a variable that can run into a terrific sum of money. This is especially true if the contractor depends on the calendar as we know it today and roughly estimates his completion period.

Let us consider the first quarter of 90 days in the calendar year and compare it to the second quarter of 91 days. We find that January of this year has 8½ non-productive or overtime-wage days, consisting of 5 half Saturdays and 5 Sundays, and at least two holidays. Strangely enough February, the shortest month in the year, has eight such days; March has six such days on which overtime wages must be paid.

All together there are 22½ overtime-wage days which must be taken into consideration in promising either the delivery of supplies or the completion of a construction contract in that period. This difference in calculation can well spell the difference between profit and loss, because the manufacturer or contractor finds himself with 90 calendar days but actually

with only 67½ of them working days free of overtime in this quarter.

In contrast the second quarter, April, May, and June, contains 70½ working days with the remainder of 20½ non-productive or overtime-wage days. So there exists a variable not only in the months but of three days between these quarters.

Consequently the contractor, or the manufacturer, or the supply dealer who promises certain accomplishments based on previous experiences may find himself behind the financial "eight ball," because the calendar of this year cannot be compared with certainty with the calendar of last year, covering the same period of time.

Operating with The World Calendar, where every day and date remains the same, the quarters are comparable. The manufacturer or the contractor knows without question when every day and date will fall. He knows that what he did last year under The World Calendar, he can do again this year because there are no extra Saturdays that creep in, no extra Sundays, no wandering holidays. All stay put.

So with the impetus for things new, for homes, appliances, motor cars, and airplanes, with all these changes should come a new and better way of date-keeping and planning. This should be ready and in active operation, awaiting an eager market when our vast manufacturing facilities, now devoted totally to war, are returned to the pursuit of the production of those things that have made America's standard of living the highest in the world.

THANKSGIVING IN 1944 PUT ON 4TH, NOT 5TH, THURSDAY

By The Associated Press

ST. LOUIS, September 3—An opinion from Attorney General Biddle's office settled the question today of the date of Thanksgiving in November, 1944, which is an unusual month with five Thursdays.

The holiday "for Federal purposes" will be the fourth Thursday, November 23, and not the fifth Thursday, November 30.

Calendar printers here had been confused over the proper date so Fred E. Winsor, executive vice president of the Associated Printers and Lithographers of St. Louis, wrote to Washington.

A reply from Newman A. Townsend, acting assistant solicitor general, said that a law approved December 26, 1941, "for Federal purposes fixes Thanksgiving on the fourth Thursday of November.' "

Mr. Townsend added, however, that State statutes on the question vary. That made Mr. Winsor wonder if some Governors would proclaim the last Thursday in November, just as a number did when President Roosevelt by executive decree moved Thanksgiving a week ahead in 1939, 1940 and 1941.

Not Since Pope Gregory Worked Out the Present Calendar in the Year 1582 Has Anyone Been Able to Put Over a New System of Dividing the Year Into Months.

Will We Get A New Calendar Next Year?

Those who publish The American Weekly *contend that its circulation of more than seven million each Sunday makes it the most widely read periodical in America. Advertising men and publishers have a way with figures, and surveys seem to indicate that an average of three people read each copy of* The American Weekly. *If this is true, more than 21 million people read this story of The World Calendar as it is reproduced here from the July 11, 1943, issue of that publication.*

IF you think we are now engaged in a global dispute, just wait until next year, because then this old world of ours is going to be the scene of a real argument, affecting the lives of more of us than any other tiff in history.

Already, there is an "army" of approximately 12,000 "liberators" or "revolutionists" all equipped and rarin' to go to carry on their side of the fight.

The battle is going to be over just this—is the world to keep on with the Gregorian calendar that has been in effect since 1582 or will we adopt a new type of calendar that has been devised to measure the kind of year that has much more balance in its arrangement?

The "army" of thousands that has been preparing its case for years now has been banded together since 1930 into The World Calendar Association.

And the reason this argument is going to be so hot next year is that, to put this new calendar into effect without mixing up things too much, the year it is done must end with December 30 falling on a Saturday. Next year, 1944, just fits that specification, and a chance like that won't come again until 1950.*

This "reform" calendar rearranges the lengths of the familiar 12 months, and in doing so equalizes the year's quarters into 91-day periods. Quarters now run from 90 to 92 days. Each quarter would begin on a Sunday and end on a Saturday. A certain date of the month would always fall on the same day of the week, and each month would have 26 weekdays, plus Sundays.

But that would be four times 91 or only 364 days. A year has 365 days, so what do we do with that extra day, just forget it?

"No," answer the "World Calendar" advocates.

The usual 31st of December would become December W, the Year-End Day, an extra Saturday. December 31, 1944, for example, would not be Sunday, December 31, 1944, but, rather, Saturday, December W, 1944; and the day after would be Sunday, January 1, 1945.

Then, of course, there is the problem of February 29. Leap year under their system would be just like every other "reformed" year, except that after June 30 would come June W, the Leap-Year Day. The advocates of the new calendar even suggest that June W and December W be celebrated as world holidays.

Religious and secular holidays would be fixed by their respective groups, according to the "World Calendar" people, and there would be a special meeting for all churches to agree upon a fixed Easter. The date suggested is Sunday, April 8, in the proposed calendar.

* EDITOR'S NOTE: Other dates upon which both calendars meet are July 1, 1945, March 1, 1946, and May 1, 1946; then not again until January 1, 1950. The most preferable date is July 1, 1945.

Now it's obvious that the United States, alone, cannot put calendar reform into operation. There must be an international agreement and, first, world-wide "propaganda." That's already been taken care of, to a great extent, by the Association.

Its members have worked hard and won the approval of 14 governments: Afghanistan, Brazil, Chile, China, Estonia, Greece, Hungary, Mexico, Norway, Panama, Peru, Spain, Turkey and Uruguay. Several global organizations—like the Chambers of Commerce of the British Empire and the Universal Christian Council—are sponsoring it internationally. And, in the United States, the National Education Association, women's clubs' national federations, state chambers of commerce, scientists' societies and several nation-wide church denominations have put their organizational shoulders to the wheel.

But there is considerable opposition, nearly all of it based on the age-old human characteristic of not liking change. For example, the "World Calendar" workers get the same sort of heckling that was voiced when daylight saving time was first suggested. "It's too new. . . ." or "It's against Nature" were typical cries of opposition.

This argument gets a laugh from the "reformers," who merely point out that calendars, like methods of reckoning minutes and hours, are nothing but man-made standards.

They'll argue, for instance, that under their system the first month of each quarter has 31 days (January, April, July and October), each quarter's second month 30 days, and each quarter's third month 30 days; this makes it possible, they say, to keep count of the days as they go by.

The "reformers' " own mouthpiece, the *Journal of Calendar Reform*, is full of homey reasons why a new 12-month calendar is needed.

For example, a jeweler wrote in a recent issue that any kind of retailer would be helped by being able to compare accurately his sales, costs or profits with those of any previous year's same period because, he noted, the week of Christmas, for instance, would always have that holiday in it and the holiday would always come on the same day of the week.

A factory executive tells how he thinks a standardized calendar will help industry—lending order and balance to the computation of production, pay-rolls, deliveries, purchasing and, especially, inventories.

Then there was a glowing tribute from the viewpoint of the housewife, who, it was said, would have much of her wartime ration worries erased by equalized year-quarters and months with the same number of days.

ACES AND DUCES KINGS AND QUEENS AND THE CALENDAR

By F. Hope-Jones, M.I.E.E., F.R.A.S.

This article is a reprint from **Horological Journal,** *London, May, 1943. Some time ago the* **Journal of Calendar Reform** *carried a story drawing attention to the analogy between playing cards and the calendar by Samuel Zovello. Mr. Hope-Jones takes umbrage with Mr. Zovello's Egyptian theory. He contends that this theory of the origin of playing cards is not supported by any of the standard works on the history and origin of cards or by the Livery of the Worshipful Company of Makers of Playing Cards. To quote the author, "There is no point in rivalry between two possible origins of Playing Cards. The useful thing is that Zovello and I both spotted the analogy . . . it interests the public in its popular appeal, even though one story may be more picturesque than the other."*

IT is always interesting to learn how things began. Students and historians have sought the origin of our playing cards and their researches have carried them back into remote antiquities and ancient civilization but nothing that we would recognize as cards has been found before the year 1400. They appear to have originated in Italy early in the fifteenth century and drifted into France. Here they came to life and acquired a distinctive design in the reign of Charles VI, the mad King. Perhaps an Agincourt bowman put a pack in his pouch, for they soon appeared in England.

We adopted the French pattern from the first. They were frowned upon by Authority as an invention of the devil and their importation was prohibited in 1463, but they would naturally prosper under repression and we find that their manufacture had grown sufficiently by 1628 to justify the establishment of the Worshipful Company of Makers of Playing Cards.

All this lends color to the tradition that they were invented by the Jester of the Court of the imbecile Charles VI to amuse his royal master in the semi-lucid intervals of his madness. The cards certainly acquired a stereotyped form, very similar to those we play with, at about that date

and it is worth while to try to follow the workings of the mind that set out their scheme in the first place.

A suggestion appeared in a letter to the *Times* in 1939 from the late Lady Charnwood that they were based on the calendar. She had it as a little girl from an old lady, in the form of a paper headed "The constitution of a pack of cards." There is nothing impossible in the theory. Let us examine it.

The inventor's first rather nebulous ideas, derived perhaps from Italy, would have visualized cards marked with different face values which could be dealt round to the players and may have contained the idea of different families or suits indicated by different colors and designs. When he got as far as trying out various designs and sets of numbers, he would find that his choice of forms and figures was so great as to be almost embarrassing, and, wrestling with a variety of alternatives whose number was legion, he might well seek some existing order on which to model his own, something to bring his floating visions to a focus and to guide him in formulating a plan.

That would be the state of his mind when he hit on the idea of taking the calendar as his guide.

He would have to decide how many families or suits he should have; how many cards in each suit and the whole pack, and the face value of the cards. We can imagine him saying to himself that about 50 would be a convenient number for a pack. Did he go to the calendar for his figure 52, the number of weeks in a year? And was his mind on the four seasons, Spring, Summer, Autumn and Winter, when he thought of four suits?

If he tried out those figures he would find that he had 13 cards in each suit, and are there not 13 lunar months in the year? It was not then realized that the moon's contribution to calendar making was a disturbing rather than a creative factor. It was held in reverence and he would accept it as a favorable omen.

He would try numbering the cards in each suit, from 1 to 13 consecutively. Accustomed to count on his fingers, he would use pips instead of figures to denote the face value of each card, and he would find that the sum total of the pips on the 13 cards would add up to 91 and that the four sets together, making up the whole pack of 52 cards, would have a total of 364 pips.

That was near enough to the number of days in a quarter and in a year to give him furiously to think. His faith in the calendar as his guide, counselor and friend would now be growing. His original idea of associating the four seasons with his four suits was implemented and fixed by giving each suit 91 pips, the fourth part of 364.

In parenthesis it should be stated that our calendar ought to have 91 days in each quarter (instead of the present 90, 91, 92 and 92) and would

have if we gave April one day and February two at the expense of one each from March, May and August.

But four times 91 gave him only 364 and he was faced with the problem of what to do with the odd 365th—the problem which had defied all the calendar makers from time immemorial, the 365th day.

He could not know that the root cause of the trouble was that the 365 rotations of the earth during its journey round the sun were indivisible into round numbers, so that you could not have exactly 52 weeks in a year, or always 91 days in a quarter unless you lopped off one day and made it 364. But his loyalty to the calendar remained unshaken. He accepted the 365th day and made an extra pip or card of it, outside the count, without upsetting his plan in the least. He called it by his own name the "Joker" and thereby built himself a permanent memorial. As a pinnacle on a spire, so it completes the pack and none is ever seen without it.

What a pity this fool's wisdom was not available when the calendar was in the making! He would have made short work of the difficulty, with the Joker up his sleeve. But it was not to be, and we have allowed that extra day to upset the symmetry and simplicity of our calendar ever since the dawn of Christendom. It gritted the machinery like sand in the bearings, or a broken tooth in the wheel-work.

It was particularly objectionable in its effect upon the wise introduction and formal establishment of the seven-day week (the fourth commandment of our Decalogue) by the Council of Nicaea in A. D. 325, since it perpetuated a misfit of the days of the month with the days of the week by persistently creeping one wrong, all down the rank, each year.

Had he been present among those grave and reverend seigneurs he would have introduced a spice of levity into the proceedings at the Council table. The folly of the fool would have confounded the wisdom of the wise by disposing of the 365th day, taking it out of the count and making it a holiday. He would have conferred upon humanity the blessings of a regular, permanent and simple calendar in which any same date in different years would fall on the same day, in which every month had the same number of weekdays and every quarter began on the same day.

It took a supreme fool, a fool of a fool, to solve this problem for the benefit of mankind. Does the divinity that hedges a King pass, when he loses his wits, to his Jester?

He gave us this perfect arithmetical solution and demonstration of the calendar problem; actually placed it in our hands every time we played a game of cards, yet we have failed to understand or use it and have permitted all sorts of cranks to gibber about all sorts of complex and unwanted systems of calendar reform.

An Italian (l'Abbé Mastrofini) re-invented the "blank" day as he called it in 1834, and a Frenchman (Auguste Comte) advocated it in 1849, but

they tied it up with such complex reform systems that the public would have none of them.

It needs little imagination to see the origin of the Court Cards. You cannot design cards with 11, 12, and 13 pips without crowding; and what could be more appropriate than Knave, Queen and King to indicate the progressive degree of importance and power? One picture card for each month, a group of three of a suit for each quarter and twelve for the twelve months of the year. So the pack is sealed in symmetry and patterned in the fabric and routine of our lives.

PITTSBURGH CHAMBER ENDORSEMENT

By Bernhard Ragner

Publicity Director, Pittsburgh Chamber of Commerce

PITTSBURGH, September 9—Approval of "The World Calendar" was voted by the Board of Directors of the Pittsburgh Chamber of Commerce at the September meeting, it was announced today.

Charles K. Robinson, Pittsburgh attorney, Chamber of Commerce vice president, and chairman of the calendar committee, who has given the subject a great amount of study for many years, is the author of the resolution adopted by the directors.

The World Calendar, advocated by Mr. Robinson, is claimed to be "balanced, regular, and perpetual." January, April, July and October will have 31 days; all other months will have 30 days, which make a total of 364. The other day will come immediately after December 30 and will be known as December W or Year-End Day. In leap years, there will be an extra day immediately after June 30 to be known as June W, or Leap-Year Day.

Should The World Calendar be adopted, January 1 will always fall on a Sunday, while the last day of the year will always be an extra Saturday World Holiday. Each quarter will have 91 days, and each holiday will fall on the same day of the week, regardless of the year.

A copy of the resolution adopted by the Chamber board will be sent to the United States Chamber of Commerce.

MISS ACHELIS PUBLISHES BOOK

REALIZING the need for a book which in a concise and authoritative way will bring together facts concerning the calendar, Miss Elisabeth Achelis, President of The World Calendar Association, has written *The Calendar for Everybody.* This will be published by G. P. Putnam's Sons, New York City 19, around the middle of November, priced by the publisher at $1.50. In her book, Miss Achelis discusses the various calendar changes from earliest Egyptian to the present time and the effects of the calendar on communal and scientific development. She points out the advantages of The World Calendar, the significance of the new civil calendar at this time and age, and shows wherein other time-plans fail to measure up to the demands of our social and economic structure. She stresses the global aspects and benefits this new time-plan will bring to the entire world and to everyone.

CALENDAR DIRECTOR SPEAKS TO ST. LOUIS ADVERTISING MEN

On a visit to St. Louis, at which time Charles Wheeler, President of Rotary International, then in convention, appointed a committee to study The World Calendar, Emerson Brewer was asked to explain the advantages of this calendar of 12 months and equal quarters to the St. Louis Advertising Club. This group of men, representing a cross-section of the commerical and manufacturing life of St. Louis, has the reputation of being one of the most progressive and active organizations among all of these very influential groups. The address given below has been somewhat abridged.

LET me quote from the *Journal of Calendar Reform:* "The task facing those who are selling a better calendar to the world is not unlike the job that faces the man who is attempting to sell a new and better plow to a successful farmer.

"For years this farmer has used an old, faithful, but antiquated plow. He has tilled his ground, raised his crops and sent his children to school. It has helped him pay his debts and has made him a respected member of his community. The long hours he has spent behind the handles of this plow, breaking the good earth, growing the crops, are long, tedious, tiresome hours; but they have become a part of his routine of life. He walks and struggles and heaves his muscle-racking way, because he knows nothing else but this type of cultivation.

"Then enters the man selling a new, better, more efficient and comfortable type of cultivator. It is pretty difficult to convince that particular farm owner that his faithful plow is inadequate; that the implement that came down to him from his father should be thrown away. The salesman must make him conscious of its inadequacies, of its costs in time, money, effort and efficiency. Then, having been made dissatisfied with his present implement, he will consider and with more enthusiasm accept the newer, better, more efficient plow as something necessary to his future economy.

"And so it is with the present calendar. The world has done very well with its calendar in spite of its vagaries during the 361 years of its existence. And because we do have better things and a better life, we have

become pretty well satisfied with our method of doing things and our existence under this obsolete time-plan.

"It is only when we are made to realize the inadequacies of the present calendar as it affects the economic life and the social existence of each one of us that we, as the farmer with his antiquated plow, become conscious of the burden we are unwittingly carrying, just because it is something our fathers and their fathers before them were satisfied to use."

In the first place I would like to have it distinctly understood that The World Calendar is not a "crackpot idea." It is a logical rearrangement of our present calendar. It is the result of the combined thinking of a great number of men and women, and is sponsored by The World Calendar Association, a non-profit, educational group incorporated in the state of New York and with offices in New York City.

Kettering, the genius of General Motors, once said that, if you want to sell anything, you must first make people discontented with that which they have, convince them that the product they are using is inadequate, and then you can more easily effect a change or conversion.

That is what I propose to do today about the calendar with which we are so familiar. In the first place we have come to accept this calendar of ours with great complacency. Probably most of you believe not only that it is infallible, but also that it is a calendar which the entire world uses. This is far from the truth. As a matter of fact there are almost as many people in the world who use other types of time-plans or calendars as there are those who use the calendar upon which we depend. Some people think that the calendar is some sort of a sacred document, a thing handed down through many generations, a God-given document that should be held as a sacred thing. There can be nothing further from the truth.

As we consider this calendar in the terms of an ordinary man's life, the allotted three score years and ten, our calendar is practically a babe in swaddling clothes. It would be five or six months old. This calendar was not even in existence in this country or in England or in many other countries when George Washington was born. Washington, according to Rupert Hughes, the author, never celebrated his birthday on February 22. According to the calendar then in use, Washington was born on February 11 and was 20 years old when the Colonies passed the resolution establishing this, our Gregorian calendar, as their official time-plan.

England experienced one of its first labor strikes when the people of that tight little island went to bed on the night of September 2, 1752, and in the brief eight hours allotted to rest and sleep, awoke to find, somewhat to the surprise of millions, that they had lost 11 days. Their Guild leaders insisted that the members of their groups should be paid for the 11 days lost while they slept that one night.

Even today if you were to board a plane in London and take off for Belgrade, Yugoslavia, January 6, when you landed you would find the people of Yugoslavia celebrating Christmas Day. Christmas bells didn't ring in Moscow until a week after we were getting over our New Year's Eve headaches. In Japan, 1943 is their 2603d year; ironically, and I hope truthfully, the year of the goat.

Of special interest to you advertising men will be the information that in one section of India there is a newspaper circulated through that area in the Far East that bears six different date lines for the six different calendars relied upon by the six different racial groups who subscribe to the publication.

Now let us analyze our present calendar and the reasons for its existence. It takes 365 days plus 5 hours plus 48 minutes plus 46 seconds to make a complete revolution. That is 365 days and practically six hours—but not quite. But for the sake of our rule-of-thumb time-keeping, we call it six hours, and then every four years we add another day. Sometime in the dim dark future, we are going to have to pay back even that accumulation of 11 minutes and 14 seconds, and about 3,000 years from now there will be a leap year without the extra day.

That brings us to The World Calendar, a logical, sensible method of rearranging the dates of our present calendar—a method that adds no time, that includes no more days, but consists only of a sensible, business-like rearrangement of the 365 days that go to make up our year.

To arrive at this rearrangement, we first divide the year into four equal quarters, each made up of 91 days. Each quarter consists of three months. The first month in each quarter has 31 days, the other two months have 30 days each. It is easy to remember—31-30-30, 31-30-30. But four times 91 days only make 364 days. What are we going to do with the 365th day? We place it where it rightfully belongs, as an extra day of the year, a day that follows December 30. We will call it World Holiday, December W, a day without a number; but a day with a name.

To take care of the extra day in leap year, we put it at the end of the first half-year, after the last day in June, and every four years we will have June W, a World Holiday, which we hope, when peace has once more been established, can be a period throughout the world when people will devote the day to tolerance and kindly thoughts for their neighboring countries.

Now what are the advantages of this orderly calendar, this new World Calendar of 12 months and equal quarters, with each first day of the quarter always beginning on the same day, Sunday, the first day of the week? In the first place, holidays will no longer jump around the week like grasshoppers. Days and dates will be constant year in and year out; time is scientifically budgeted. For the first time in history, here is a calendar

that correlates all of the different time-units, the day, the week, and the month—all three coming together at the end of each quarter.

But the hard-headed businessman of today is not going to advocate a calendar change for purely social reasons, or just so that he can more easily remember the day on which the wife's birthday happens to fall. The advantages of The World Calendar are financial; they are social; they are definitely economic.

Before we talk about the calendar as it affects the advertising profession, let us take the case of the average merchant. He looks at his store volume at the end of the month, and he probably says, "This has been a swell month. I did $23,000 worth of business. Compared with the same month last year, I am 10 per cent ahead." But the chances are—and any bookmaker in America will give you odds of one to four—that he is wrong. It is quite possible, in fact it is probable, that the same month last year contained fewer or more Saturdays. There may have been more Sundays. A long holiday week-end may have reduced last year's volume, so as a matter of fact he is just guessing.

Now let us take a typical example. October, 1942, had five Saturdays; October, 1941, had four Saturdays. There is a 20 per cent adjustment in Saturday's figures alone. It just happens that in 1943 a further October adjustment has to be made because Columbus Day, October 12, which was celebrated on Monday two years previous, will be celebrated on Tuesday. A Monday holiday means a long week-end for many of his customers, consequently volume drops and his figures become more erratic. But let us forget the retailing business for awhile and take an actual example of a well-known electric utility company.

The comptroller of a power company, proud of company accomplishment, sent a letter to the stockholders, saying that in January, 1936, 220,000,000 kilowatt hours were produced, whereas in January, 1937, 258,000,000 kilowatt hours were produced. He told with a certain amount of justified satisfaction that January, 1937, showed an increase of 17.3 per cent. But a stockholder wrote back explaining that January, 1937, had an extra Saturday and Sunday. It is generally known that these two days show a decrease in electric power used. As a matter of fact, it is 30 per cent less on Saturday and 75 per cent less on Sunday. The stockholder pointed out that making allowance for the extra week-end, the rate of increase becomes 21.5 instead of 17.3. However, this error could have been even more embarrassing because the comptroller's figures could have been in the reverse had the months been opposite. That much for the utility business.

Let us take the case of a contractor who is figuring a big construction job on a series of houses. Labor costs make up about 60 per cent of any estimated contract. Hence, the number of working days in each month,

holidays discounted and half-days off, can well represent a variable that can run into a terrific sum of money. This is especially true if he depends upon the calendar as we know it today. As a matter of fact, this can mean the difference between a nice fat profit or a very dismal loss.

Let us consider the first quarter of 90 days in the present calendar year and compare it with the second quarter of 91 days, and we will see how these errors can very justifiably creep in. We find that January has 8½ non-productive or overtime-wage days, consisting of 5 half-day Saturdays, 5 Sundays and at least one holiday. In spite of the fact that February is the shortest month, it has 8 such days, and March has 6 days upon which overtime wages must be paid. All told, there are 22½ overtime-wage days, if they are to be productive days. So promises of completion, or in the terms of the manufacturer, promises of deliveries, if haphazardly based on 90-day intervals, can be a very risky business. The manufacturer finds himself with 90 calendar days that contain only 67½ ordinary working days.

In considering the second quarter, April, May, and June, there are 91 days and yet this second quarter contains 70½ ordinary working days, with the remainder 20½ non-productive or overtime-wage days. So there exists a difference of three days between these two quarters.

Unless the concern or the builder promising delivery in a stated period has carefully checked the regular working days in each quarter, discounted the holidays and the overtime working days, there is a lapse of at least three days, and this is a burden that might spell the difference between profit and loss, between specified and delayed delivery, all the result of the present vacillating calendar.

Let's take the insurance business. We all know the hours an insurance salesman spends, the meals he has missed, and the worry it seems to be his burden to carry because some policyholder failed to plan his budget and is threatened with a policy lapse. Insurance men know too well that premiums falling due on Friday and Saturday are seldom delinquent. Premiums falling due in the middle of the week show a delinquency increase of 25 per cent. These same figures obtain in the instance of the small loan organization, the credit jeweler or the installment furniture house.

But there is another factor of the present calendar that works to the embarrassment of the insurance companies. There are 13 so-called "scarlet days" upon which no policy can be dated. This comes about because annual policies can be converted to quarterly policies, and there are 13 days when quarterly dates either fall on Sunday or on a holiday. Of course, the insurance companies do not lose by this because they make adjustments in their offices. Nor does the policyholder lose, but it does cause no end of confusion and extra detail not only in the national office or head-

quarters but in every sales office or agency throughout the country.

It has become the banking practice to make notes for 90-day intervals, but under our present system of calendar calculations the first quarter of the year has 90 or 91 days, the second 91 and the third and fourth 92 days each. Under the 90-day note arrangement, prevalent throughout the world, an extra burden is placed on the lender and borrower alike, due to this haphazard irregular calendar.

In The World Calendar year with four quarters of exactly 91 days, a quarterly note can be reckoned as an exact fourth of the annual rate, or a 30-day note as one-third of the quarter. This is true even during the 31-day months because the extra day is always a fifth Sunday.

For many, Federal Income Taxes will continue to fall due March 15, June 15, September 15, and December 15. When the 15th falls on Sunday, payment naturally is deferred to the following day. It is interesting to note that because one payment date fell on Sunday in 1942 the delay of one day cost the government $178,000 in interest lost on money that would normally have been in the day before.

There are two advantages of The World Calendar that appeal particularly to attorneys—the division of the year into quarters of precisely equal length, and the fact that a month-date comes always on the same weekday. The term "year" means legally 12 months, the term "half-year" means six months, "quarter-year" three months, but under the present calendar these divisions are unequally arranged.

The first half-year is 181 days, the second 184 days. The shortest month is three days shorter than the longest month. The year is out of balance. The lawyer consequently cannot use such terms as the fourth and last Monday, Tuesday, or Wednesday since a certain month may have five such days. Should a particular legal event fall on the second or third Friday, let us say, and that Friday happens to be a holiday, the hearing must legally go over to the following day. This presents inconvenience, confusion, delays, and expenses. Attorneys know this, and that is why in every attorney's desk there is a perpetual calendar that is referred to day in and day out, bringing margin for error and adding confusion of work.

Among those associations and groups that have endorsed The World Calendar is the National Education Association, together with the individual endorsements of literally thousands of educators. It is logical that they do find the present calendar a constant worry. School schedules usually start the first day after Labor Day. Labor Day is the first Monday in September. This can be from September 1 to September 7. So schools can start from September 2 to September 8.

Under many state laws the school year must include 190 days to deserve a portion of the state's school fund. This, of course, is inclusive of legal holidays and exclusive of Saturdays. If school starts, shall we say,

September 4, the first half of the school year ends on January 25 and contains 91 school days. The second half of the school year ends on June 21 and, unfortunately, contains 95 school days.

This means new catalogs each year for colleges, business schools, and high schools. It means the cost and preparation of those catalogs. It means added work for the teachers in the scheduling of classes, in the rearrangement of teaching schedules. A man high in educational circles told me that the school systems of this nation would save more than a half million dollars in printing bills alone should the stabilization become effective.

But now let's get into the advertising business, and advertising means sales. I don't have to tell you fellows the hours that you have spent making up the schedules, each schedule tailored to order because of the need and the vital necessity of avoiding certain days and dates. Grocery items, as a rule, are advertised Wednesdays, Thursdays or Fridays. Every day and date must be checked with meticulous care for fear that some Wednesday, Thursday or Friday is a national holiday or a day preceding a holiday when our migratory American housewife decides to spend the day at the beach or some resort.

In my days in the advertising business, with clients normally and naturally revising schedules with utter abandon, asking for new schedules, or bringing out new products, I know too well the cost to my various agency employers, occasioned by the fact that we never know the day and date a month from now without carefully checking it. This same condition obtains in coordinating the sales efforts of your client through his divisional offices down through the wholesaler and retailer. Advertising calls for long-range planning, each effort dependent upon the other. Consequently a change in the original schedule is a change that must be effected all the way down the line. And many a harassed sales manager has spent sleepless nights trying to reconcile an advertising schedule with the efforts of a sales organization, when either a holiday on Wednesday or a holiday near the end of the week interrupted his plans.

Last Christmas is a typical example. Christmas fell on Friday. No one, merchant, publisher, agency, no one knew what to do. Newspaper publishers did not know how to plan their paper. Some stores opened on Saturday and some stayed closed. As a result there was the utmost in confusion. One New York publisher told me that they had to "eat" 80,000 papers, papers printed at a loss because they had no rule to go by in establishing their print run.

With The World Calendar, schedules once established could be followed year after year without deviation, without research, without extra hours for the media department, and without the constant fear and threat of a perfectly natural error. The advertising business is a business of detail,

and I am convinced that no branch of commerce or industry could be helped as vitally by the adoption of The World Calendar as would be the business or profession which you men represent.

Now how far has this plan for calendar revision gone? In the first place, 14 nations have already endorsed this logical rearrangement of our dates. Countless advertising groups, luncheon clubs, women's clubs, groups of accountants, actuaries, insurance men—in fact, the gamut of endorsement for The World Calendar contains the names of literally countless people who find in this plan an arrangement whereby their life will be simplified, errors—costly errors—can be avoided, and the opportunity of doing more business more easily will be their reward.

The World Calendar of 12 months and equal quarters, planned, constant, orderly, and I say again a simple rearrangement of our present calendar, becomes a definite aid in the accomplishment of the purposes of any group, any business or any social effort.

OBITUARY NOTES

ALEXANDER WYLIE, who in 1937 retired from government service as Director of Accounts of the Interstate Commerce Commission, died in August, 1943. Since 1931, Mr. Wylie has been a member of The World Calendar Association. After his retirement from government service, he moved to Himrod Farm in Schuyler County, New York.

SAMUEL CHAPMAN, 84 years old, died May 22 at his home in Brighton, Sussex, England. Mr. Chapman, a member of The World Calendar Association for many years and an ardent supporter of calendar reform, at one time advocated a change in the names of the months, more in keeping with their sequence, as a means of universal clarification.

DR. JAMES OZRO ENGLEMAN, 70, former President of Kent State University in Kent, Ohio, died of a heart attack while on a fishing trip on Lake Erie, September 15. Retiring from the university presidency in 1938, after ten years in that office, Dr. Engleman had since been professor emeritus of educational administration at Kent State University. He had been Vice President and psychology professor of the State Normal School at La Crosse, Wisconsin; field director of the National Education Association; a professor at the University of Chicago and Ohio State University; superintendent of schools at Terre Haute, Indiana, Decatur and Joliet, Illinois.

JOHN KIERAN'S "ONE SMALL VOICE" SPEAKS FOR WORLD CALENDAR

John Kieran is definitely the triple-threat man of the writing profession. With equal ease, he quotes a line from Browning, the batting average of a semi-pro in the sand lot league, or identifies some rare bird that would mystify a paid-up member in the Audubon Society. A veteran of "Information Please," and now a movie star in his own right, John Kieran writes a syndicated column which appears each day in many of America's larger newspapers. The following article is taken from the January 29, 1943, issue of the* New York Sun. *The orderliness of The World Calendar of 12 months and equal quarters has long appealed to Mr. Kieran.

THERE is no point in being really bitter about it but, confound it! when the war is over and the great minds set about putting the world into better order for the future, some sub-committee certainly should be appointed to straighten out the calendar. The one we have been using for centuries is a timekeeping system of shreds and patches.

Take a look. January has 31 days. February has 28, and in leap year 29, but not every fourth year is a leap year, which is a further complication. March has 31 days. April has 30. May has 31. Who did this to us? It's like trying to measure Time with a rule that has 12 inches to an hour here, 13 inches to an hour farther along the yardstick and one lap where there are only 11 inches to an hour with an asterisk—(*) so—indicating a slight change from the normal as suburban railroad timetables indicate (*—Does not run on legal holidays) or (#—Stops only on signal).

Great Cæsar's ghost! The reference is pointed because Gaius Julius Cæsar had a hand in patching up our calendar. However, it was for other reasons that Brutus and his friends stabbed him. As far as the Roman calendar was concerned, the emperor and author of *De Bello Gallico* realized that something drastic had to be done and he did a repair job that held the thing together for about 16 centuries. Come to think of it, that's a fair record for a repair job, at that.

It wasn't any worry about the Ides of March that caused Cæsar to take a look at the calendar. He had it all repaired before the Ides of March had unfavorable mention in his unheeding ear. The truth is that the calendar was completely out of whack when Cæsar moved in and took charge

of all things Roman. Little by little the seasons had slipped their moorings and conditions had become so scandalous that one day Cæsar, shivering from cold in a season that should have been warm by the calendar, said angrily:

"Whither are we drifting? Is there a doctor in the house? Let's have some professional advice."

So they called in a skilled worker by the name of Sosigenes, who held a union card in Local No. 1 of the Amalgamated Order of Pontifices, Astronomers and Licensed Calculators.

"This calendar has broken down completely," said G. J. Cæsar, pointing an imperial finger at the accused tablets. "Do a good repair job and charge it to my account."

Sosigenes, under the ægis of Gaius J. Cæsar, Imperator, tossed the moon out as too variable a factor for calendar calculations and used the sun as an anchor to windward. Where the seasons were three months astray when he went to work, he came up with the Julian calendar that, for all practical purposes, slipped backward only a total of ten days in 16 centuries.

That was where Pope Gregory XIII took hold, also with professional advice, and made further repairs. The first thing to do was to catch up, so October 4, 1582, by papal decree, was followed by October 15, thus erasing the ten-day lag, and the Gregorian calendar was launched on a career that ultimately carried it to most parts of the civilized world. It's the one we use now.

Only a "snapper-up of unconsidered trifles" could quarrel with the Gregorian calendar as far as the regulations concerning the length of the year and the succession of the seasons are concerned, but the monthly divisions that still survive are relics of moon madness of old pagan days—Luna, from which we get our uncomplimentary term "lunatic."

We have confusion thrice confounded by months of three different lengths. There is no regularity of dates for the days of the week. If we wish to know on what day of the week October 23 will fall this year, we have to look it up on the calendar because it keeps shifting each year. We still have September, October, November and December, derived from the Latin *septem, octo, novem* and *decem,* indicating sensibly that they were, in proper order, the seventh, eighth, ninth and tenth months of the Old Roman year. But we have them, in grossly improper fashion, the ninth, tenth, eleventh and twelfth months of our year. This would be enough to make even a high school student of languages recoil with horror if he gave it a moment's thought, which happily he does not.

There are two leading schools of thought as to what should be done about all this. One school proposes a 13-month calendar, four weeks to each month, with the necessary interpolated—or "intercalated," as the technicians put it—days to keep things straight.

Then there is The World Calendar Association, sticking to the old order of 12 months but revising the number of days in the months to a definite and orderly system. It's a neat calendar, backed by many persons of wide learning and high repute, and it would be a benefit to simple citizens of all nations if it were adopted throughout the world. But the great task is to get it adopted.

Legislators are cool to it for the simple reason that it isn't an issue on which a man could be elected to, maintained in or thrown out of public office.

OBITUARY NOTES

Noted French Writer Dies

DR. H. A. JULES-BOIS died July 2 in New York at the French Hospital. He was 74 years old. Poet, historian, and essayist; former Vice President of La Société des Gens des Lettres; delegate of L'Idée Française for North America; author of *Democracy* and *France and America Partners;* Officier de la Légion d'Honneur; Commandeur de l'Ordre du Phénix (Greece); Chevalier de l'Ordre de Léopold (Belgium).

This eminent French political student has been in this country since 1915. He had been sent to the United States at that time to counteract German propaganda of World War I. He soon found a place for himself as an interpreter of the Anglo-French-American economies.

As early as 1934 Dr. Jules-Bois became interested in The World Calendar and was instrumental in having articles on this subject published in *Le Messager de New York*, a review of Franco-American relations.

Colombian Chairman Dies

DR. EDUARDO POSADA, chairman of the Colombian calendar committee, author of many important historical and biographical works, and said by many to be the greatest living historian in South America, died at the age of 80. Assuming the chairmanship of the calendar committee in 1935, Dr. Posada said, "I have always been interested in calendar reform, and I find this new project very proper and wise. It is one which will at last solve this complicated problem. The calendar we are favoring fortunately continues the useful divisions of the year into 12 months. It is with great pleasure that I accept the chairmanship of your committee."

As his son said in notifying Miss Elisabeth Achelis, President of The World Calendar Association, of his father's death, "He was a fervent partisan of your work and very much interested in all the publications which you sent him."

Commenting on the death of Dr. Posada, Miss Achelis said, "We have lost one of our most ardent, enthusiastic, and intelligent supporters as well as a good and loyal friend."

CALENDAR REFORM ACROSS EIGHTEEN CENTURIES

As shown by source materials available in the Columbia University Library

By Bertha M. Frick, with the collaboration of S. A. Ives

Miss Frick is Curator of the Plimpton, Smith and Dale Libraries of Columbia University. The article which follows has been divided into two parts, the first of which appears in this issue. What started out to be a bibliography listing the books of calendar source material available in the Columbia University libraries has developed into a very interesting story on the calendar as indicated by this source material. In all, there are about 1,000 books and manuscripts, some of which were written before the invention of printing. In the bibliography furnished by Miss Frick, 71 of these are selected and arranged by probable date of composition, later works being arranged according to the date of the first printed edition.

I

THE subject of the calendar appears early in literary records, and, once begun, seems never to have lost its appeal, to judge by the volume of literature devoted to it. It is necessary only to glance at the entries under "calendar" and related terms in the catalog of any large library to get an idea of the quantity of material. The printed catalog of the great British Museum, for example, lists nearly five thousand items under the broad heading "Ephemerides." The New York Public Library published a *List of Almanacs, Ephemerides, etc., and of works relating to the Calendar in the New York Public Library* in its *Bulletin* (v. 7, 1903) which includes about two thousand items. It is true that such general lists contain hundreds of calendars and almanacs which contribute little to our knowledge of the development of the calendar. On the other hand, there are omitted many valuable items which exist in periodicals and as parts of books only, such lists usually being confined to whole books on the subject. The attempt will be made here to point out some of the important *source* materials, especially those relating to calendar reform, which are available in the Columbia University Library, mainly in the collections presented by Professor David Eugene Smith and the late Mr. George A. Plimpton. To develop this point of view seventy-one representative items have been chosen. A complete list of the Library's resources on the calendar would approach a thousand items.

II

For our survey we shall begin with the first century of the Christian era, with the Roman citizen Pliny, known as Pliny the Elder, who perished in the destruction of Pompeii in 79 A. D. His name has come down through the ages for his famous *Historia Naturalis*, one of the main sources for contemporary information in many fields of scientific knowledge. To this work we are indebted for a near-contemporary account of the Julian calendar, while writers for several centuries afterward quote Pliny as their source of information.

The *Historia Naturalis*, available for fifteen centuries in many manuscript copies, was one of the first scientific books to be printed (Venice, 1469). An idea of its popularity can be gained from the fact that, in spite of its immense size, there were eighteen incunabula editions, three in Italian and the remainder in Latin. Its importance is attested down to the present, since even now a new English translation is in process of publication.

Although the succeeding centuries produced writers who included discussions of the calendar in their works, not until the sixth century does a really important figure for this field come on the horizon. This is the Alexandrian Greek, Dionysius Exiguus, the first writer (ca. 525 A.D.) to present the method of reckoning from the birth of Christ. For centuries the "Dionysian cycle" was the standard used for the determination of Easter. A manuscript of Dionysius' work, available in this Library, includes rules for determining the date of Easter as well as methods for ascertaining the phase of the moon on the earliest possible date for Easter, the current indiction, epacts, leap years, etc. Special interest is attached to this manuscript as it is the only one by this author recorded in the United States.

The latter part of this century produced the scholar, Isidore of Seville (ca. 570-636), considered the most learned man of his time. His *Etymologiae* (known also as *Origines*), an encyclopedia of twenty books, was the standard authority quoted by all prominent medieval writers. Its fifth book, "De Temporibus," includes an account of the length of days, months, seasons, etc., while the "De Cyclo Paschali" shows the method of determining Easter, using the Dionysian 95-year cycle. This comprehensive work was probably first printed in Strassburg in 1472, to be followed by seven other editions before the close of the fifteenth century.

In the century after Isidore appeared one of the greatest scholars of the middle ages, the Venerable Bede (ca. 673-735), born in Northumberland and often called "the father of English learning." His writings on the calendar were the foundation for all future treatises on the subject. His *De Temporibus*, written in 704, gives an account of the divisions of time, including methods of computing epacts, Easter, etc. In his *De Temporum*

Ratione he fixed the date of the Resurrection as March 27, included a Paschal table for the years 532-1063 and, most important for our discussion, observed that the equinoxes were taking place some three days earlier than at the time of the Council of Nicaea (325 A. D.) Here, then, in 725, is one of the earliest specific statements of the error in the calendar, an error which was debated and reckoned upon for more than seven and a half centuries before the Gregorian reform was made in 1582.

It has been said that the thirteenth century represents the awakening of the world after a long period of intellectual inactivity. This is the era which witnessed the rise of the great universities of Paris, Oxford, Cambridge, Padua and Naples, and it is in this century that England produced three scholars of outstanding importance in the work of calendar reform: Sacrobosco, Grosseteste and Roger Bacon. Johannes de Sacrobosco (John of Holywood, ca. 1200-1256) is probably best known for his *Sphaera,* the standard astronomical textbook for some three hundred years. But his particular interest for us lies in his *De Anni Ratione, seu Computus Ecclesiasticus,* probably written about 1230 while he was a student at the University of Paris. The work may well have been the one used by the scholars of the later middle ages for their lectures on the "Computus," a required part of university studies. In this treatise Sacrobosco pointed out the error in the length of the year and the divergence of the true equinox from the twenty-first of March, which at that time amounted to seven or eight days. He offered a method for correcting the calendar, suggesting that one day be dropped every 288 years, if the method of reckoning 365¼ days to each year were continued. In spite of the scientific information contained in the book, much of it is written in popular style, including such mnemonic verses as the familiar:

> Sep. No. Iun. Ap. triginta date,
> reliquis magis uno,
> Ni sit bissextus, Februus
> minor esto duobus,

which, translated, became the familiar: "Thirty days hath September," etc.

At about this same time, the *Compotus* of Grosseteste, Bishop of Lincoln (d. 1253), was written, probably while he was Chancellor at Oxford. His work marked a new departure in scientific writing for he advocated working out the problems of time measurement by experimental methods, making use of astronomical instruments, rather than relying merely on tables and cycles.

But the most prominent scholar in England at this period was Roger Bacon (1214-1294), a pupil of Grosseteste at Oxford and a disciple of his in advocating use of experimental methods for calculating the length of the solar year. Bacon's *Compotus,* written at intervals in the years

1263-65, formed a complete treatise on the calendar. Not only did it include a fuller history of the subject than is to be found in any earlier work, it also summed up all the evidence against the assumption of the current ecclesiastical calendar.

With the scientific accomplishments of Grosseteste and Bacon before us the stage is set for the events and writings which finally led to the reconstruction of the calendar. It has been stated that "it is not too much to say that the Gregorian reform was largely prepared by these two men." (Sarton. *Introduction to the History of Science.*)

III

Before proceeding with the direct events which led to the change in the calendar mention should be made of a body of literature which might be called background material, that is, the *Computi* of the middle ages. "Computus" (or "Compotus") was the name given to the treatises which included simple directions for determining the dates of significant times and seasons, particularly the movable feasts in the Church, of which the most important was Easter. To facilitate memorization, brief rules were written in verse, a modern survival of one of them being the familiar "Thirty days hath September" mentioned above. As a further means of simplification, the ancient practice of finger notation was adapted to calendarial usage, each finger and the knuckles of each finger being given special significance. A handbook which included this feature was known as a *Computus Manualis.* All lists of medieval manuscripts include a great number of *Computi,* attesting their contemporary importance. Apparently one of the most popular was the *Compotus Manualis* of a certain "Magister Anianus," who was probably a French monk of the latter half of the thirteenth century. There are extant a great many manuscripts as well as scores of printed editions of his work, which was the first *Computus Manualis* to be printed (Strassburg, 1488).

These *Computi* played an important part in the steps which finally led to calendar reform. Since the compilation of a true calendar requires some knowledge of astronomy, the computists gradually became aware of the errors in the calendar. Knowledge of the *Computus* was a requisite for every priest in an age dominated by the Church, when an error in reckoning of the time of observation of church festivals was looked upon as heresy. It becomes increasingly evident that the most influential factor in the movement toward calendar reform was not so much a compelling need for scientific accuracy but rather the desire of the Church to celebrate its feasts on the correct days.

IV

We now proceed to direct attempts within the Church to modify the calendar. The first figure is that of Cardinal Pierre d'Ailly (1350-1420), Chancellor of the University of Paris, who delivered his *Exhortatio super Kalendarii Correctione* at the Council of Constance in 1417. In his discourse he outlined the history of the ecclesiastical calendar, citing Grosseteste particularly for his accurate observations. Although the Cardinal named three principal errors in the calendar, all were based on the incorrect figure for the length of the year. He emphasized the confusion in the reckoning of Easter, saying that "these errors have been a disgrace to the Church and a source of derision for her enemies." He proposed three methods for correcting these errors and concluded by imploring the Council to at least find some way to correct the solstices, equinoxes and days of the new moon. However, the Council was so concerned with healing the papal schism and with various reforms in the Church that it seems to have taken scant notice of the need for reform of the calendar. The Cardinal was an important figure, taking a leading part in all the discussions, and at a more propitious time could undoubtedly have pushed through his reform. A later generation thought highly enough of his proposals to include the *Exhortatio* in an edition of his more famous *Imago Mundi* (Louvain, ca. 1485). The facsimile available here includes Columbus's manuscript commentaries in the margins.

Thirty years passed and another calendar-reforming cardinal appeared —a German, Nicolaus Cusa (1401-1464). He delivered an address at the Council of Basle in 1436, maintaining that a number of days would have to be omitted in order to set the equinox right—which, of course, was the procedure finally adopted. But again the Council did not act, and Cusa's treatise, *Reparatio Kalendarii,* took its place in the mounting body of literature on the calendar.

But after almost another half century, the Church itself took the matter in hand. Pope Sixtus IV must have heard of the fame of the German astronomer Regiomontanus (Johannes Mueller von Königsberg), lecturer at Venice, Ferrara, Padua and Rome, and author of the first printed almanac (1474). For in 1475 the Pope invited Regiomontanus to come to Rome to supervise the reconstruction of the calendar. But the reform, now admitted by the Church as long overdue, was again forestalled—this time by the untimely death of Regiomontanus, in the very next year. It can only be regretted that the correction of the calendar had not been effected at this time, before the great schism, the Reformation, took place, dividing the Church into two such hostile factions that unanimity on the question of the calendar proved impossible.

In the following century various works criticizing the calendar ap

peared. It is significant that Sacrobosco's treatise on the correction of the calendar (see above, p. 132) first appeared in print at this time (Wittenberg, 1538) although written some three hundred years before. An idea of the interest displayed in the movement can be gained by the fact that this work was reprinted no less than a dozen times before the reform took place in 1582.

The first hint that definite action might be forthcoming is the interest of Pope Pius IV (1555-1559) in plans presented by Pietro Pitati, well-known astronomer of Verona. Pitati had made a great number of observations to determine the true lunar and solar periods, presenting his findings and theories in his *Verae Solaris atque Lunaris Anni Quantitatis aliarumque Rerum ad Calendarii Romani Emendationem Pertinentium . . . Explicatio.* But it remained for a later figure to carry the project through.

One of the first acts of Pope Gregory XIII on his assumption of office in 1572 must have been to gather to his court some of the famous astronomers of the day, notably Luigi Lilio (Aloysius Lilius) and his brother, Antonio, to set them to work on a new calendar. A plan was finally drawn up which recommended the dropping of ten days, in order to restore the equinoxes to their true date, and to count century years as intercalary only if they were divisible by 400. So drastic an act as to destroy ten days must have made even a pope wonder whether his power and influence were great enough to carry it through. As a preliminary and precautionary measure, in 1577 Gregory sent letters to various Catholic princes of Europe and to outstanding universities stating the need of reform and enclosing a draft of the measures proposed by Lilio and approved by a committee at Rome. What consternation his communication must have caused! Undoubtedly many of the princes, although flattered by the Pope's attention, were torn between loyalty and conservatism. There is evidence of the indecision of one prince, a certain Swiss duke, Emanuel, who, unable to judge the matter himself asked the advice of his friend, Giovanni Battista Benedetti, a Venetian mathematician of some merit. There is available Benedetti's answer to Emanuel in a communication entitled, "De Temporum Emendatione," dated April, 1578. The letter, however, serves rather to present Benedetti's ideas of how the calendar should be changed than to convey an opinion of the plan offered by Gregory. And Benedetti himself was no half-way reformer; he proposed to make a thorough job of it. He said that the first day of January should be moved back so that it would correspond to the beginning of the winter solstice and proposed a redistribution of the number of days per month:

Nov., Dec., Jan.	each 29 days
Feb., Mar., Oct.	each 30 days

Apr., May, Aug., Sept.	each 31 days
June, July	each 32 days

By such an arrangement Benedetti calculated that the sun would be entering each of the twelve zodiacal signs on the first day of each month. It is readily seen that his plan was primarily that of an astronomer rather than that of a churchman or business man.

Apparently Gregory received no objections strong enough to override his convictions for his famous bull, *Calendarium Gregorianum Perpetuum. Orbi Christiano Universo à Gregorio XIII. P. M. Propositum,* issued under date of "Sexto Calend. Martii," 1581, in which he proclaimed that the ten days between October fifth and fourteenth were to be omitted in the following year. He admonished creditors to take account of this time and add ten days at the end of the periods when loans would become due. He forbade printing of the new calendar by any except officially designated printers "lest errors be made," threatening fines and even excommunication "no matter in what part of the world they may be in" for violations of this injuncture. The announcement closed with the command that the edict be posted on the doors of churches and inserted in all volumes containing "Calendaria" and "Martyrologia."

The official version of the complete Gregorian calendar came out the next year, with another communication from the Pope, dated April 3, 1582, giving credit to the Lilio brothers for their work and granting to Antonio (Luigi had died in 1576) all printing rights for a period of ten years. Also included was an explanation of how the calendar should be corrected, in order not to interfere with any holy days, in countries where news of the change might not arrive until 1583, 1584 or even 1585.

And then the bomb burst! Hardly had the reform been decreed than a storm of criticism descended. Only the Catholic countries consented to adopt the new calendar and thus there is apparent one of the paradoxes of history. Although the agitation for the reform of the calendar had been promulgated by religious zeal to assure the correct time for the celebration of Easter and other holy days, it was the violent and bitter protests of the religious groups in Protestant countries that prevented adoption of the corrected calendar. Among such groups, the reform was known as the "Popish Calendar" and the whole thing denounced as a "Popish scheme." There is a large body of literature on this subject written entirely from a theological point of view by antagonists of the Church of Rome. There was also considerable criticism from the scientists, although, in the beginning at least, they, too, were all adherents of the Protestant Church.

While the Pope probably had scores of men on whom he could rely for purely theological arguments, he needed some one able to answer the scientists. Since the man most responsible for the astronomical calculations embodied in the new calendar, Luigi Lilio, had died, the Pope ap-

pointed the German Jesuit scholar, Christopher Clavius, to vindicate the calendar's scientific features. Clavius eventually (1595) issued a remarkably clear and detailed explanation (*Romani Calendarii à Gregorio XIII. P. M. restituti explicatio*), but he felt compelled to answer some of the critics directly before the complete exposition was ready.

Among the first of the scientists to make a printed protest was Michael Maestlin, professor of mathematics at Tübingen and teacher of Kepler. In the first few years following the publication of the Gregorian calendar, Maestlin issued several attacks upon it, some in German and others in Latin. Finally, in 1588, Clavius took it upon himself to answer with *Novi Calendarii Romani Apologia, adversus Michaelem Maestlinum,* bitterly accusing this "somebody" of writing "arrogantly and insolently" and for his own personal glory. In the meantime (1586) another prominent Jesuit, Antonio Possevino, had entered the fray with his *Errores adversantium Kalendario emendato.* Maestlin replied to him, in 1588, with *Defensio alterius sui Examinis, quo . . . demonstraverat, quod Gregorianum novum Kalendarium . . . totum sit vitiosum, adversus . . . A. Possevini . . . ineptissimas elusiones.* Perhaps Possevino was absent on one of his numerous papal missions. At any rate, Clavius responded for his friend with *Defensio Antonii Possevini e Societate Jesu contra Michaelem Maestlinum.*

Of all the contemporary opponents of the Gregorian calendar, probably the two most important were Joseph Justus Scaliger and Francois Viète. Scaliger was born into the Catholic Church but had later renounced it and at the time under consideration was a lecturer at the newly established Protestant University of Leyden. He has won lasting fame as a critic, both for the immense amount of knowledge he displayed and for the bitterness of his comments. His greatest work, *De Emendatione temporum,* a comprehensive chronology, is non-polemic in character. But he also wrote a scathing criticism of the Gregorian calendar, *Elenchus et castigatio anni Gregoriani,* which Clavius answered immediately with: *Iosephi Scaligeri Elenchus, et castigatio Calendarii Gregoriani . . . castigata.* Statement by statement Clavius enumerated Scaliger's points and, in turn, refuted them, thus forming a sort of dialogue.

Although Viète has been called the greatest French mathematician of the sixteenth century, he acquired considerable notoriety through his unscientific criticism of the Gregorian reform and his bitter personal antagonism to Clavius. Viète advanced a scheme of his own for changing the calendar, maintaining that his was the "true" Gregorian calendar. He even prefixed the bull of Gregory XIII to his work, *Relatio Kalendarii vere Gregoriani ad Ecclesiasticos Doctores. Exhibita Pontifici Maximo Clementi VIII.* Well for him that he was a Protestant and so out of reach of excommunication!—Two years later he issued a short tract, *Adversus Christophorum Clavium Expostulatio,* accusing Clavius of having slandered

him to the Pope, and calling upon the order of Jesuits to excommunicate "all who should by design and fraud stand in the way of Christendom," meaning, of course, Clavius. He appealed to Pope Clement VIII to alter the bull of Gregory according to the "true" calendar. Naturally such high-handed proposals could not go unanswered and the next year saw the publication of *Admonitio Theodosii Rubei . . . pro Christophoro Clavio . . . adversus Francisci Vietae Expostulationem.* "Rubeus," asserting that Clavius was his teacher, paid tribute to Viète's ability and said that he felt that it was necessary for him to speak in behalf of Clavius, since the latter was "contending single-handed with one who is lawyer, theologian, mathematician, orator and poet." This gallant gesture loses some of its force when it is realized that Clavius is thus merely defending himself, since "Theodosius Rubeus" is only his pseudonym! "Rubeus" implied that recourse would be had to papal authority if this "Expostulation" were not sufficient to quiet Viète. Be that as it may, Viète died this very year; but Clavius continued to denounce his opponent, mentioning him frequently in many later writings, until his own death in 1612.

There were other sporadic attempts to depose the new calendar, but this period, the most critical and the most bitter, was over and the Gregorian calendar has weathered all lesser storms until this day.

Concluded in the next issue of the JOURNAL OF CALENDAR REFORM.

THE 24-HOUR CLOCK

From* Collier's, *August 14, 1943

WE used to be faintly annoyed when, beginning soon after we got into the war, the military way of stating the time of day cropped into magazine articles and news stories—22:15 hours for good old 10:15 P. M., and all that.

Now, however, we rather like the 24-hour clock idea; and we think it has a psychological value which could hardly have occurred to whoever thought the plan up to begin with.

This psychological value of the 24-hour clock is that it shows you unceasingly that today you have only one day—one stretch of 24 hours—to make the most of. There's no starting all over again at noon with a fresh set of time numerals; the procession of the hours marches right on through to 23:59 before a new procession can begin.

The general effect, mild but insistent, is to encourage one not to waste any time. Anything that will do that is all to the good—and will be increasingly so. We're likely to need all the time we can find, and then some, for at least the next ten years.

CURRENT PRESS COMMENT

What We Do Today Is Vital

Ottawa (Canada) Evening Citizen

August 28, 1943

The homely virtue of repetition is to emphasize the good. We wish to state again and again that the planned and perpetual World Calendar has a real contribution to make for more effective efforts and for the conserving of time, money and material. Its ordered arrangement of days and dates, weeks and months, quarter and half-year divisions achieves perfect coordination and cooperation, more needed today than ever before to win the victory and to bring success to our many undertakings.

The World Calendar is not an isolated cause separated from our many activities, whether these be for the winning of the war, for postwar planning, or for the coming of the peace. It is a link and real part of all our efforts. For is not time the most precious commodity we have, and is not everything we think, plan, do and say predicated on time, by means of the calendar? The best is only good enough. The World Calendar is the best. Let us not fail in this needful task that is ours to do today—to approve and to adopt The World Calendar.

The New World Calendar Advocated

Johannesburg (South Africa) Rand Daily Mail

February 15, 1943

A new World Calendar is advocated by The World Calendar Association to replace the existing Gregorian calendar, which, it is contended, has many anomalies leading to confusion and dissatisfaction.

In this "World Calendar," the year is divided into four seasons; each season has three months, made up of 13 weeks or 91 days. The first day of each season is a Sunday, and the last day a Saturday. The first month of each season has 31 days and the other two 30 days each.

At the end of the year an extra day is added, to be known as Year-End Day, which will be a special Saturday between December 30 and January 1.

An ordinary year will have 365 days and a leap year 366 days. In a leap year the Leap-Year Day will occur between June 30 and July 1. The Year-End Day and Leap-Year Day, it is suggested, should be designated as World Holidays and dedicated to unity and brotherhood.

The date of the month and the day of the week would coincide every year. Thus Christmas Day, December 25, would always fall on a Monday. A birthday on a Tuesday in one year would occur on a Tuesday every year.

The movement to replace the present calendar by a more modern and efficient one has been in existence for several years, but it is felt by The World Calendar Association that the end of the present war should herald "a new calendar for a new world."

It is urged that the end of 1944 and the beginning of 1945 would be the most suitable time for the change to be made.

Dr. J. H. Dobson, Chairman of the National Anti-Waste Organization, considers that the adoption of the new calendar would be one of the most important anti-waste features of the planned social order for which the present conflict is being waged.

EXCERPTS AND REVIEWS

At the Poles

By DR. C. H. CLEMINSHAW

From The Griffith Observer, *Griffith Observatory, Los Angeles, February, 1942*

AT the North and South Poles there is no time of day. The rotation of the earth on its axis causes the sun and the stars to move parallel to the horizon. The sun rises and sets only once a year. When it is noon in the United States, the sun is in the south. From the North Pole the sun is in the south 24 hours in the day. One might say that it is noon all day. However, the pole is only a point and a person occupies more than a point. If it is noon at his nose, it will be 6 P. M. at his left ear, midnight at the back of his head and 6 A. M. at his right ear. He will have all the time in the world!

Why "Leap Year"?

Reprinted from the Horological Journal, *London, December, 1942*

THE Julian astronomers called it *bissextile* (*bis*, twice; *sextus*, six), the sixth day before the *Kalends* (March 1) being doubled. When the change over to February 29 was made nobody knows—or how the inappropriate term "leap year" was coined. We recommend the problem to all fireside "brain-trusts" this Christmas. (But please don't ask us!)

The Metric System and The World Calendar

From The Office, *New York, N. Y., April, 1943*

CHANGES for the better are promised, and expected, when this war ends. There is no reason why management should not hope that some of these forthcoming changes will benefit office work. Among the many improvements that office managers might suggest, there are two which would have far-reaching good results, not only for our future paper work, but for the benefit of business and the people in general. One change for the better is the adoption of the Metric System in the United States (and England, too), and the other is the world-wide adoption of The World Calendar.

The metric principle, which we now use for our money and which is used by practically all the rest of the civilized world for all its measuring, would make our industrial planning and record keeping far simpler and closer to perfection. Most of us heard all the arguments in favor of the Metric System when we were in grammar school. Our teachers told us how much easier it would be to learn all our weights and measures tables if we only had to memorize half a dozen simple Latin and Greek prefixes and do conversion problems by just moving the decimal point. Yet, we still have our queer way of measuring in most businesses today.

As for The World Calendar, it has been officially endorsed by fourteen nations, excluding the United States. Because December 30, 1944, falls on Saturday, both in our present calendar and in The World Calendar, the following day, normally December 31, can become the World Holiday, and the The World Calendar can become operative Sunday, January 1, 1945.

Here are a few general faults of our present calendar:

1. The three common divisions of the year are unequal (months, quarters and half-years) and the month is not a multiple of the week.

2. The entire calendar changes each year. Holidays fall on different days and business firms, churches, schools and others (whose routine is affected by various holidays) can never use the one best method of conducting their activities.

3. All of us—employer and employee, manufacturer and distributor, seller and buyer—must continually re-

arrange our routines to allow for irregular months, unequal seasons, unfair rental terms and unbalanced working and rest periods.

The World Calendar Association has done much to publicize the benefits of making the change and when we consider the facts behind the promulgation of our present calendar, we are amazed that some change was not made long ago. No doubt many people believe that the calendar is as far beyond adjustment as is the weather. And Ol' Man Inertia just keeps rolling along.

Well, there are two things—the Metric System and The World Calendar—that would aid business in general and office work in particular. No doubt many office executives have additional ideas for improvements. We will be pleased to learn these suggestions so that they may be given the publicity they deserve, and need, if there is any chance for their general adoption.

Wall Calendar Museum

From a Letter by Dorothy Herzog, New York City, April 27, 1943

FROM the American Antiquarian Society of Worcester, Massachusetts, comes some interesting facts concerning early wall calendars. This Society has a large collection of wall calendars from the early American printers to the present time. Miss Herzog gave us the following interesting quotation:

". . . regarding early Wall calendars.

"Early in the 18th century there are many instances of printers issuing broadside Almanacs, although this only meant that they took all of the pages of the Almanac, generally sixteen, or sometimes twenty-four, and printed them in broadside form, rather than as a pamphlet. They were undoubtedly intended for wall use, but I should not call them calendars.

"We have a large collection of wall calendars. The first which we have is 1841, a small calendar published at Troy, N. Y., in black and white. The next is a colored calendar with a border, published at Boston for 1852. After that date they become more frequent."

Old Calendars Burned

By THOMAS WAYLING

House of Commons Press Gallery, Ottawa, Canada

CANADA must have foreseen that the old calendar would become obsolete. The old corduroy-bound catalogs of the Library of Parliament, written in beautiful script by the old Librarians, list several hundred old Almanacs. Enquiry for any of them brings the reply: "Sorry but they were burned in the fire which destroyed the Parliament buildings in 1916."

The fine old circular Library building was saved from the fire, but, curiously enough, these particular volumes happened to be lodged in the Reading Room and so went up in smoke. Possibly the fire fiend considered them obsolete.

"Best Things in The Worst Times"

ON the cornerstone of a chapel in Leicestershire, England, there appears an inscription which is extremely appropriate today. The inscription is dated 1653 and reads as follows:

In the year 1653
When all things sacred
were throughout ye nation
either demolished or profaned
Sir Robert Shirley, Baronet,
builded this church;
whose singular praise it was
to have done the best things
in the worst times
and to have hoped them
in the most calamitous

Backs New Calendar

From Pittsburgh Post-Gazette, *September 27, 1943*

THE Pittsburgh Junior Chamber of Commerce has announced endorsement of the new World Calendar. In a resolution passed at its September board meeting, the chamber declared that "this simplified and standardized calendar was practical enough to meet almost all objections raised by those who wish to continue to use our present irregular Gregorian calendar."

FROM THE MAIL BAG

It shall be my privilege and pleasure to cooperate fully in every way towards revising the present calendar which is clearly the cause of some confusion.—The Rt. Rev. Hoyt M. Dobbs, Jackson, Miss.

I back The World Calendar Association 100 per cent, and am proud to work in its support of the modern, efficient World Calendar, the precision of which befits our streamlined and mechanized age.—James F. Forcina, Trenton, N. J.

When I look at your calendar and at other perpetual calendars which have been worked out, I wonder how long the people of the world are going to be willing to live under the out-of-date Gregorian calendar. As long as we use this old calendar, we are going to have to spend much time studying perpetual calendars in order to determine the days of the week of certain dates both in the past and in the future. How easy it would be to adopt The World Calendar at the end of 1944 and then use these complicated perpetual calendars only when considering dates in the past. The World Calendar—the best perpetual calendar I have ever seen—would take care of the future.—Dr. A. M. Harding, Pres., Univ. of Ark., Fayetteville.

Our present calendar is as illogical as the British monetary system and our inherited linear measurements. Yet change should not be impossible. You will not find us obstructing your efforts, I assure you.—Frederick J. Libby, National Council for Prevention of War, Washington, D. C.

Keenly interested.—Rt. Rev. John C. Cody, Bishop of Victoria, Canada.

I am heartily in favor of calendar reform . . . The World Calendar is probably the best that can be achieved in the way of calendar reform. I have, in fact, given one or two talks advocating its adoption. — Gordon R. Bingham, Vice President, Great Northwest Life Insurance Co., Spokane, Wash.

I surely trust that 1945 will see the inception of the "new order" in time reckoning.—N. M. Powell, Yorkville, Ohio.

I am in favor of the proposed change.—B. H. Graham, Supreme Clerk, The Supreme Camp of the American Woodmen, Denver, Col.

I am completely in favor of your proposed World Calendar and I'll do my best to further your cause.—Willy Ley, *PM*, Brooklyn.

I am in full accord with your aims. Shall be glad to do all I can to further it.—Dr. Theodore A. Benedek, Writer, New York City.

Your publication seems to me a powerful argument for a reform of the calendar and would, if carried out, mark a great improvement.—Baron Col. Sir Herbert M. Jessel, London.

I personally agree entirely with the aims of your Association.—Pitman B. Potter, The Brookings Institution, Washington, D. C.

We of the Council would very much like to see the adoption of The World Calendar. —Alvin Austin, Executive Director, National Council for the Promotion of Father's Day, New York City.

Ever since I first heard of The World Calendar, I have been heartily in favor of it, and with the stabilization of Easter, I will the more heartily endorse it.—Rev. J. S. Edwards, S.T.B., Grants Pass, Ore.

Greatly interested, and hope to extend information on the subject.—F. Howard Seely, Purchasing Agent, San Francisco.

You are doing a marvelous work and I hope it will soon go over.—The Rev. Carl I. Shoemaker, Philadelphia.

In connection with the new calendar for a New World, personally, I believe that the introduction of the new calendar would be of great benefit.—Edgar J. Fisher, Assistant Director, Institute of International Education, New York City.

I heartily endorse the movement for a new world calendar and I trust that your efforts will be successful.—W. E. Masterson, Temple University School of Law, Philadelphia.

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Membership is based on active interest in the study of adequate and effective improvement of the calendar. Owing to lack of space, a large number of names have been omitted. They will be printed in future issues.

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INTERNATIONAL ORGANIZATIONS FOR REFORM OF THE CALENDAR

ARGENTINA: Comité Argentino del Calendario Mundial, Admiral José Guisasola, Chairman, Ministerio de Marina, Buenos Aires.

AUSTRALIA: Committee on Calendar Reform of the Australian and New Zealand Association for the Advancement of Science, C. W. Allen, Secy., Solar Observatory, Canberra.

BELGIUM: Belgian National Committee on Calendar Reform, Professor M. Dehalu, President, l'Université de Liège, Liège.

BOLIVIA: Comité Boliviano del Calendario Mundial, Don Moises Santivanez, Chairman, Biblioteca Nacional, Sucre.

BRAZIL: Comité Brasileiro do Calendario Mundial, Rear Admiral Radler de Aquino, Chairman, Rua Raul Pompeia No. 133, Rio de Janeiro.

CANADA: Rational Calendar Association, Lt.-Col. J. Murray Muir, Secy., 82 Jane St., Toronto 5.

CHILE: Comité Chileno del Calendario Mundial, Prof. Alberto Cumming, Chairman, Calle Manuel Rodriguez, Santiago.

CHINA: Chinese Association for the Study of Calendar Reform, Dr. Ch'ing-Sung Yü, Director, National Institute of Astronomy, Kunming, Yunnan.

COLOMBIA: Comité Colombiano del Calendario Mundial, Bogota.

COSTA RICA: Comité Costarricense del Calendario Mundial (Igualmente de Guatemala, Honduras, El Salvador y Nicaragua), Don Teodoro Picado, Chairman, San José.

CUBA: Comité Cubano del Calendario Mundial, R. P. Mariano Gutierrez Lanza, Chairman, Belén Observatory, Havana.

DOMINICAN REPUBLIC: Comité Dominicano del Calendario Mundial, Barney N. Morgan, Chairman, Box 727, Ciudad Trujillo.

ECUADOR: Comité Ecuatoriano del Calendario Mundial, Dr. Rafael H. Elizalde, Chairman, Calle Cienfuegos 158, Santiago, Chile.

ENGLAND: Rational Calendar Association, C. David Stelling, Director, 38, Parliament Street, London.

FRANCE: Comité National pour la Reforme du Calendrier, Senateur Justin Godart, President; Paul-Louis Hervier, Secy., 5, Rue Bernoulli, Paris.

GERMANY: Deutscher Ausschuss für Kalenderreform, Dr. Grosse, Geschäftsführer, Neue Wilhemstr. 9/11, Berlin N. W. 7.—Der Weltbund für Kalenderreform, Dr. Rudolph Blochmann, Secy., 24 Lornsenstrasse, Kiel.

GREECE: Greek National Committee on Calendar Reform, Prof. S. Plakidis, Secy., Observatory of University of Athens.

HUNGARY: Hungarian Committee for Study of Calendar Reform, Dr. Paul Vajda, Secy., 9 Eotos Utca, Budapest.

IRELAND: Committee for Calendar Reform, E. K. Eason, Secy., 80, Mid. Abbey St., Dublin.

ITALY: Italian National Committee on Calendar Reform, Prof. Amedeo Giannini, Secy., Via del Seminario, 113, Rome.

MEXICO: Comité Mejicano del Calendario Mundial, Dr. Joaquin Gallo, Honorary President; Dr. Horacio Herrera, Chairman, Sociedad de Estudios Astronomicos y Geofisicos, Av. Observatorio No. 192, Tacubaya, D.F.

PANAMA: Comité Panameno del Calendario Mundial, Juan Rivera Reyes, Chairman, Panama City.

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PERU: Comité Peruano del Calendario Mundial, Don Luis Montero y Tirado, Chairman, Casilla 220, Lima.

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SPAIN: Spanish Calendar Reform Committee, Rev. Father Antonio Romañá, S.J., Chairman, Observatorio del Ebro, Tortosa.

SWITZERLAND: Swiss Committee on Calendar Reform, Prof. Emile Marchand, Secy., Mythenstrasse 2, Zurich 2.—Comité International de Coopération de l'Association Universelle du Calendrier, M. Raymond Mage, Secrétaire Général, Palais Wilson, Geneva.

TURKEY: Committee on Calendar Reform, Dr. M. I. Dereoglu, Secy., P. O. Box 1121, Hanhaym Han No. 1o, Istanbul.

URUGUAY: Comité Uruguayo del Calendario Mundial, Prof. Alberto Reyes Thevenet, Chairman, Liceo de Ensenanza Secundaria Hector Miranda, Calle Sierra 2268, Montevideo.

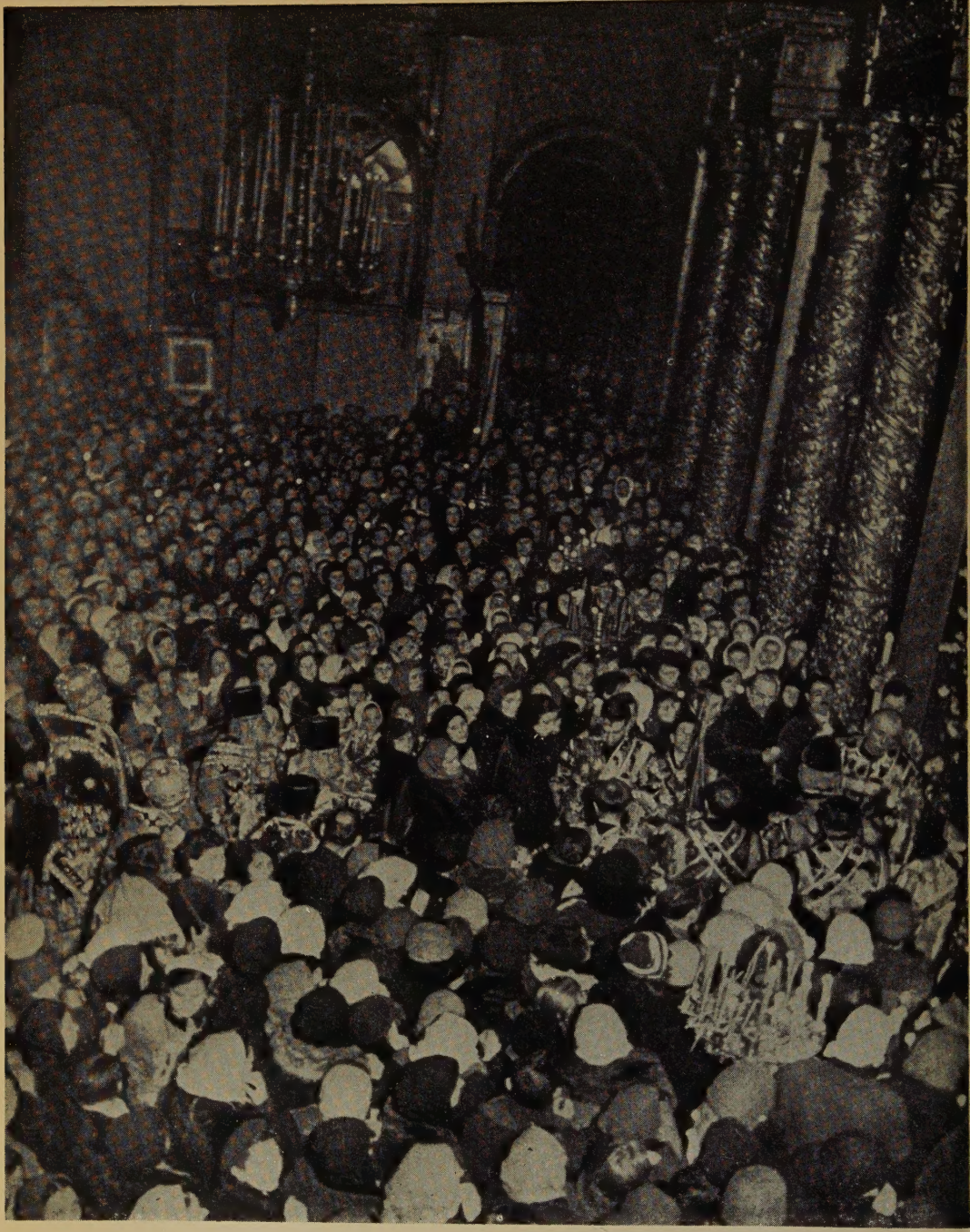
VENEZUELA: Comité Venezolano del Calendario Mundial, Don Edgar J. Anzela, Chairman, Apartado de Correos No. 207, Caracas.

YUGOSLAVIA: Yugoslavian Committee on Calendar Reform, Georges Curcin, Chairman, Poenkareova 25—III, Belgrade.

ATTENDED BY ALL THE POMP AND circumstance of its ancient rites and rituals, a midnight ceremonial, recently conducted by the Russian Orthodox Church in the Moscow Cathedral, formally and publicly installed a new Patriarch for all the Russias.

Hailed throughout the world as a great triumph for Christendom and for religion in general, this news came as a complete surprise to those not conversant with political developments in the Soviet Union. To many millions and to the majority of churchmen, Moscow, since the revolution, has been regarded as a world citadel of communism and atheism.

In the early post-revolutionary days the higher councils of the Communist Party had banished not alone the Russian Orthodox Church but all religious institutions. With the public installation of a new Patriarch of the Russias, religion has come to the Soviet Union.



A Midnight Ceremony in the Moscow Cathedral, Formally and Publicly Installed a New Patriarch for all the Russias. *(See Russia's Changing Tide, Page 147.)*